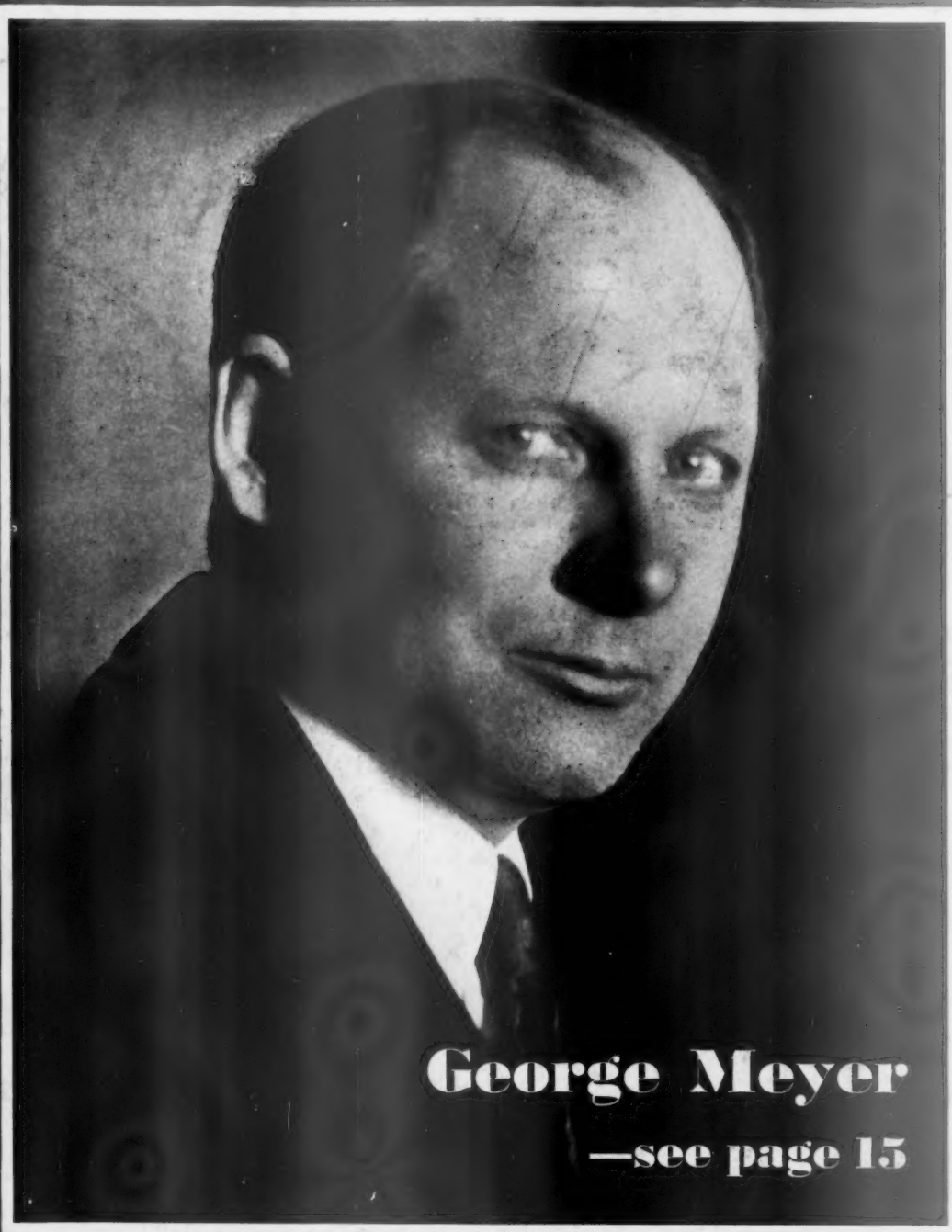


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George Meyer

—see page 15

Vol. V No. 8

AUGUST 1937



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NUMBER 8

August 1937

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PAGE 2

PURCHASING

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Yours on Request

Purchasing agents will find it well worth their while to read the publications reviewed on this and the following pages. From among the many submitted to us, they have been selected by the editors as having greatest interest and utility value to purchasing agents.

To obtain copies, simply fill in and mail coupon at the bottom of this page.

140. The complete line of Stanley Electric Tools is illustrated and described minutely in the 48-page, 5" x 7", Catalog No. 64M. Some of the tools included are electric drills, grinders, chucks, hammers, sanders, saws, screw drivers, unishears. Also shown are accessories such as screw driver bits, drill stands, drill and grinder attachments, rotary files, emery wheels, hammer tools, etc.

141. Sixteen different types of motors, five generators and a full line of ventilating fans are shown in the Diehl Mfg. Co.'s 12-page, 8 1/2" x 11" Catalog No. 1881. Facilities for nation-wide servicing via authorized service stations throughout the country are available.

142. U. S. Rubber Co. has compiled a 48-page, 8 1/2" x 11" catalog devoted almost entirely to its line of hose. Among the hose products represented are air, welding, water, agricultural spray, lawn, steam, fire and mill, forestry, unlined linen, water suction, agricultural suction, oil, rotary, gasoline, solvent and paint spray.

143. Carbonized papers of all types, including hectograph carbon for duplicating machines and tele-type roles as well as typewriter and pencil carbons, are described in the General Manifold & Printing Co.'s booklet of Multiplex Papers. This booklet contains samples of coated paper stocks.

148. In its 192-page Caster & Wheel Manual, the Darnell Corp. presents detailed information, engineering data and prices covering casters, wheels, glides, desk shoes, etc., for all requirements. Photographs of each item represented in this complete manual are supplemented with drawings showing detailed dimensions.

149. A profusely illustrated 24-page, 8 1/2" x 11" booklet has been prepared by the Acme Steel Co. to explain its Unit-Load method of bracing carload freight, uniform and mixed ladings. Photographs of shipments of a wide variety of products indicate the diversified applications of this method, which, according to the manufacturers, prevents damage, reduces cost of bracing, lowers freight bills, insures customer good will.

150. The Anaconda Wire & Cable Co. presents invaluable and detailed information in its 32-page "Industrial Guide for Selection of Wire and Cable," which features nine large colored charts recommending insulation and protective coverings for exposure. Other topics treated are the relief of costly industrial "headaches"; the factory's arteries and nerves; factors affecting selection of wire and cable; guide to selection of insulation.

151. Catalog No. 14 of the Federbush Co., is a convenient index to a comprehensive line of loose leaf binders, catalog covers and sales equipment, memo books and visible record equipment. The binders include the ring, post, prong and zipper types, suitable for everyday use or for transfer and storage files. The catalog contains 180 pages, bound loose leaf style, with a unique marginal guide for ready reference.

152. "How to Ship by Air Express," No. 2 in the Hinde & Dauch Paper Co.'s series of packaging handbooks, points out new merchandising possibilities open to shippers since development of air express to its present efficiency. The ease of shipment and almost total absence of "red tape" in packaging regulations is also described.

153. An attractively illustrated folder, produced by Bliss & Laughlin, Inc., is devoted to ground and polished steel shafting. Photographs reveal the modern production methods, text describes the applications as well as facilities to manufacture to both standard and special steel chemical compositions.

154. Operators of trucks, buses, tractors, industrial equipment and farm implements on which rubber tires are used will find valuable information in the recently released 1937 edition of the B. F. Goodrich Co.'s "Operators' Handbook," 66 pages, pocket size. Of particular interest are the various data tables, the Calculator for figuring actual truck tire costs, the chapter on load ratings and inflation pressures.

155. Photographs of actual installations in well known plants adorn the Lyon Metal Products Co.'s 24-page, 8 1/2" x 11", catalog on Commercial Steel Shelving. Illustrations and thorough descriptions of all types of shelving and parts are included. Emphasized is the simplicity of design and construction, whereby shelving may be assembled, adjusted, completely disassembled and re-erected with ease.

156. A chart showing the comparative costs of letters on rag content and non-rag content bond papers is a feature of a handsome Strathmore Paper Co. portfolio. Accompanying the portfolio are samples of distinguished letterheads.

157. Neoprene, a material with rubber-like properties yet resistant to the effects of oil, heat, sunlight, chemicals and oxidations, is described in a new 28-page handbook published by E. I. du Pont de Nemours & Co. Specific applications of neoprene, including hose, electrical cable, molded parts, extruded material, sheet goods and gaskets are detailed.

158. 52 types of hand lift trucks and skid platforms are illustrated and described in a convenient folder prepared by the Yale & Towne Mfg. Co. One section of the folder sets forth the operating features of all models in compact form.

159. Ingersoll-Rand Co.'s Bulletin No. 1972-B illustrates the Cameron Motorpump condensate return unit and shows many of its applications. Specifications, dimensions, blue prints and a complete data table on capacity, discharge pressure, pump size and motor h. p., size of reservoir gallons, quantity of condensate, floor space, shipping weight, etc., are included.

160. "The World Behind a Watermark" is divulged by the Nekoosa-Edwards Co. in a handsomely lithographed, 24-page, plastic spiral bound book embellished by striking full-page photographs. The book offers a fundamental education in the art of paper making and lists the various properties for which paper is pre-tested to insure uniformity in manufacture.

(Additional listings on page 6)

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161. Facts and figures about the newly improved horizontal Cooper Hewitt lamps are given in the General Electric Vapor Lamp Co.'s illustrated booklet, "Greater Lighting Efficiency." Redesigned for better industrial lighting, the lamps incorporate improvements such as increased light output per watt, instantaneous starting, horizontal suspension, greater operating stability, etc. Valuable engineering data helps to compute proper spacing, essential dimensions and layout of lamp suspension.

162. Free samples of an economical, wedge-shaped paper drinking cup for office or factory use, packed in a re-usable bakelite desk humidifier, are offered by the Logan Drinking Cup Co. Division, U. S. Envelope Co.

163. Prefaced by an interesting history of phosphor bronze, the Seymour Mfg. Co.'s Phosphor Bronze Manual sets forth the various properties of this useful alloy, which is available in sheets, strip, wire, rods, circles, bridge plates. Tables of gauge numbers and millimeter equivalents, comparison of wire gauges and density or specific gravity are included.

164. Silent gears made of Celoron, a laminated plastic, are described in a booklet issued by Continental-Diamond Fibre Co. Detailed engineering data is included, with special emphasis on horsepower rating per inch of face.

165. The Shippert Mfg. Co.'s Bulletin No. 37 is devoted to its line of connectors for V-belts and tools for attaching them to the belts. A page of general information represents answers to virtually all questions concerning V-belt couplings.

166. Announcement of the development of three styles of standard cemented carbide blanks is contained in the Carboloy Co.'s Catalog M-37. The three styles in 96 sizes are adaptable for use on more than 90% of all carbide tools. Full scale drawings of all styles and sizes are accompanied by detailed specifications and prices.

167. Useful information and suggestions are offered by the West Disinfecting Co. in a booklet entitled "The Proper Maintenance of Floors." All types of floors—wood, cement, tile, rubber, linoleum, magnesite, concrete, cork, mastic, etc.—are considered. Explanations of the qualities of various floor maintenance products are given.

168. A new line of tubular steel stands for typewriters and other business machines is pictured in Catalog No. 835 of the Sherman-Manson Mfg. Co. A stand for virtually every type of business machine, as well as for heavy books such as

ledgers and directories, is represented, along with a line of general utility stools for filing and other purposes. Complete specifications given.

169. The story of the development of various bakelite resinous materials, their general characteristics, properties and applications is set forth in the Bakelite Corp.'s new booklet, "The Versatile Service of Bakelite Materials." The booklet constitutes an answer to the often-heard question: What is Bakelite?

170. A new pricing arrangement which results in lower net prices in larger quantities is a feature of the Sectional Post Binder Catalog recently issued by C. E. Sheppard Co. 36 styles of binders are illustrated, accompanied by specifications and dimensions of both stock and special sizes. These sizes cover virtually every need imaginable.

171. "Facts About L. L. Brown Papers" is a 28-page booklet representing a catalog of permanent and durable record and correspondence papers. All papers are rag content, the majority being 100% rag. Among the types of papers included are ledgers, linens, bonds, typewriter, manuscript covers. Accompanying the booklet is a portfolio of samples entitled "Evidence of Paper Values."

172. A new 16-page, 8 1/2" by 11", spiral bound Catalog of Trimo Tools is being released by the Trimo Mfg. Co. Made of forged steel, the tools represented are various styles of wrenches, pipe cutters, vises, etc. Introduced for the first time is a Sawing Vise Set for holding, sizing and cutting thin wall tubing.

173. "A Guide to Longer Life for Iron and Steel Products" provides a simple yet comprehensive explanation of the galvanizing process. Issued by the American Hot Dip Galvanizers Association, this booklet presents the origin of the term "galvanizing," historical side lights, the properties of zinc, modern needs and applications of galvanizing, etc.

174. A new 64-page catalog of its complete line of braided and molded hose has just been produced by Electric Hose & Rubber Co. The data and information is indexed according to purpose as well as kind of hose. A loose-leaf form and pocket size also contribute to convenience.

175. A Public Address section of particular interest to purchasing executives is included in the new 1938 Winter Catalog No. 69 of the Wholesale Radio Service. This section features a new re-designed series of amplifiers, sound and inter-communication systems. Other sections are devoted to radios for home, farm and auto, replacement parts, tubes, test equipment and a line of electrical appliances.

176. A thorough explanation of the properties which distinguish its Triple-A No. 20 heavy duty protective coating for steel, iron, concrete and other surfaces comprises the Quigley Co.'s 8-page, 8 1/2" x 11" Bulletin 281-B. Photomicrographs, descriptions of exposure tests, photos of actual applications in the industrial, railroad, marine and public utility fields are augmented by facts pertaining to coverage, cost, protection, resistance, methods of application, uses, etc.

177. Just off the press is C. J. Tagliabue Mfg. Co.'s 56-page Catalog No. 1060C. It presents latest information on a complete line of indicating, recording and controlling instruments for temperature and pressure. Numerous illustrations depicting operation and installation are supplemented by detailed engineering data, charts and specifications.

(Additional listings on page 4)

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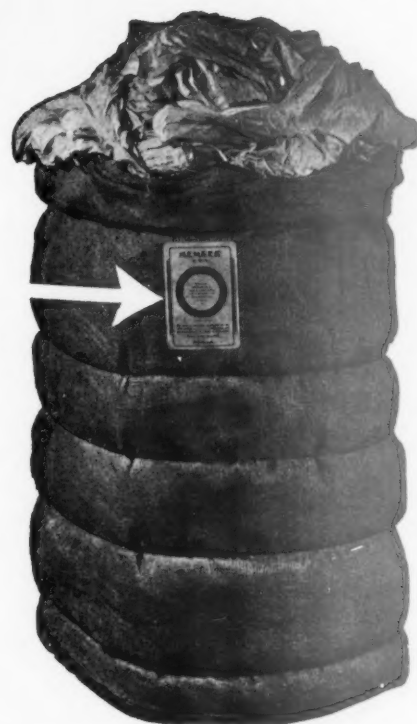
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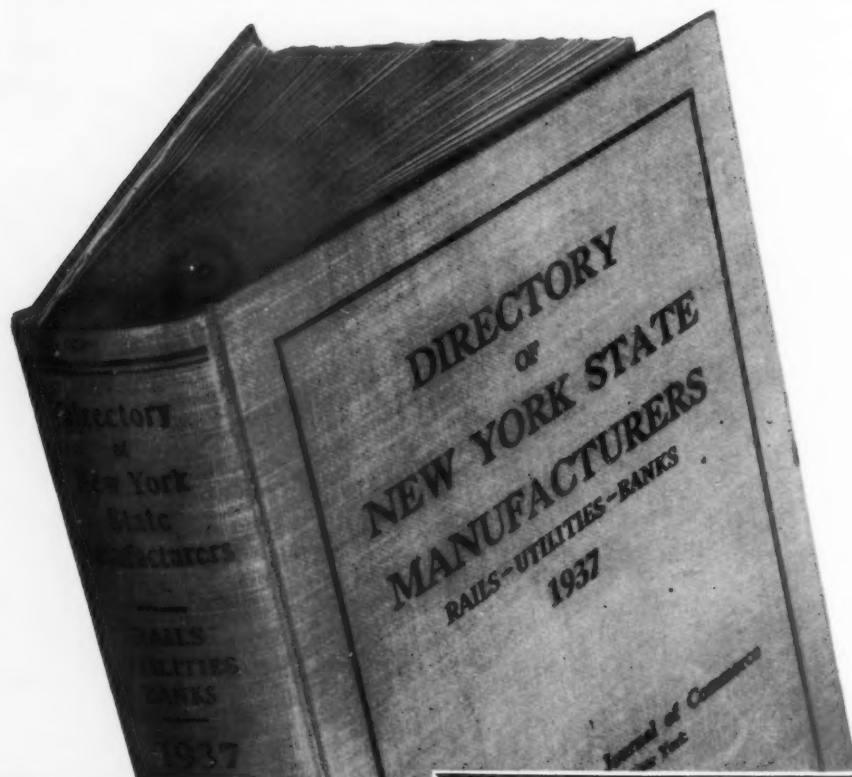
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CONTENTS

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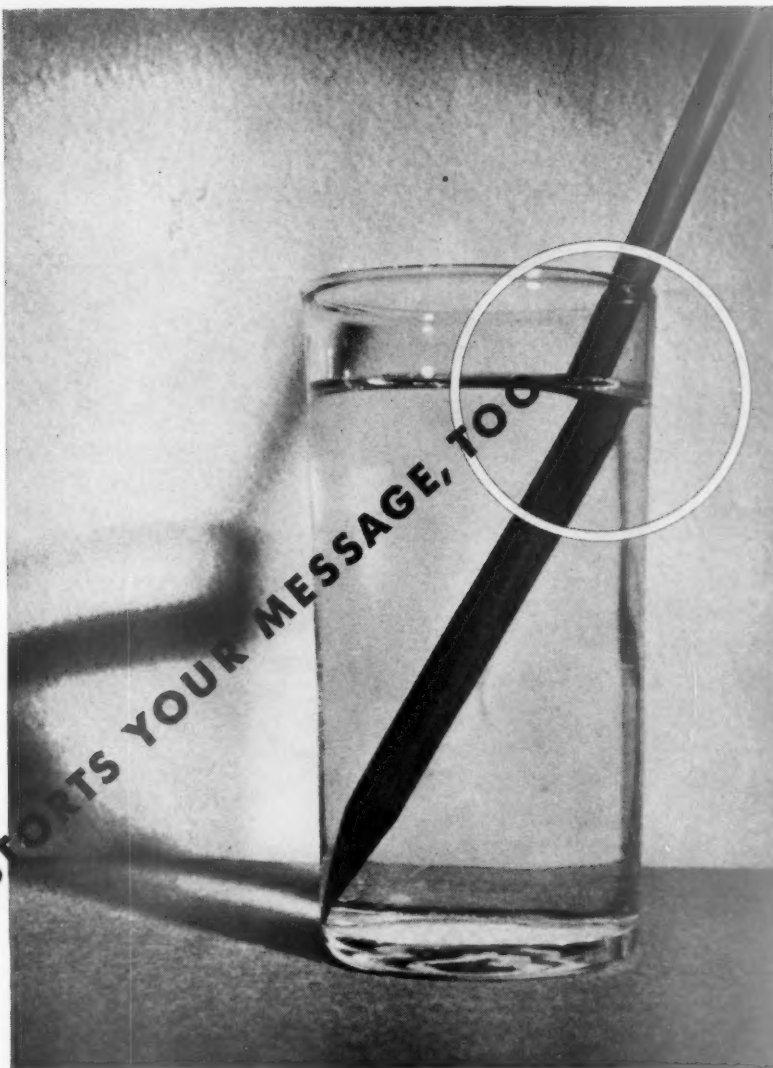
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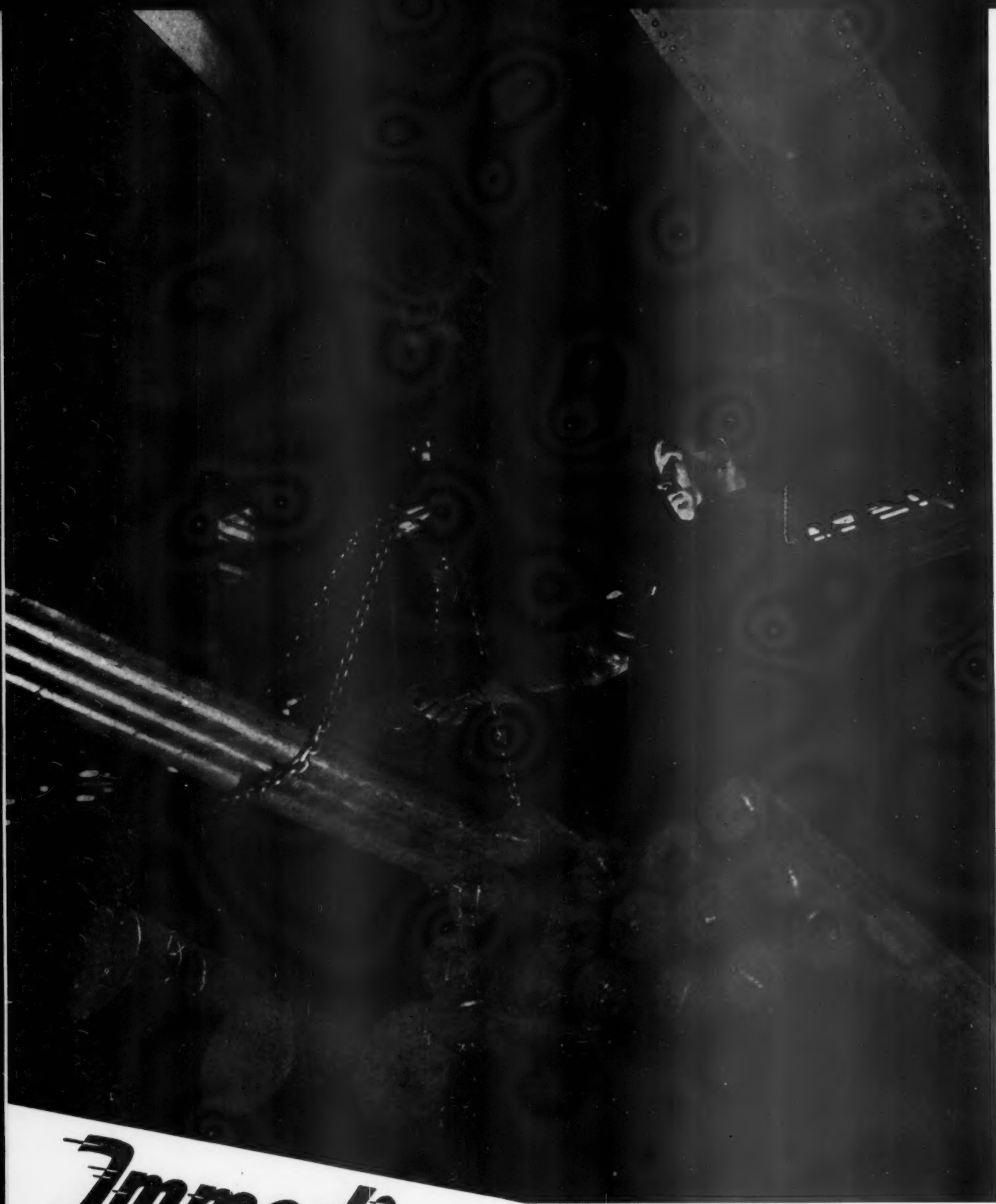
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Toward Stabilization

THE steel industry deserves hearty commendation for its action in announcing fourth quarter prices some six weeks earlier than the customary date. Even if the new schedule had been an adjustment or change, in place of reaffirmation of current levels, or without the circumstance that orders placed now are principally—of necessity—for fourth quarter delivery, that commendation would still be deserved. For it is a substantial step toward a market situation in which confidence and reasonable planning ahead can take the place of guesswork, however intelligent.

Not that price levels should be fixed inflexibly for any arbitrary period in advance. Such a situation is not consonant with an economic order which is in a constant state of development and change. It would be unfair to ask complete price stability from either the producer's or the consumer's side. But when costs are fairly well known or predictable, rates of production well maintained, and outlets assured, it is the part of reason to avoid those changes and rumors of change that result only in feverish accumulations of inventory or deferred buying, without any real effect on the actual consumption of material.

A second feature of the recent commodity market situation that has received less than its due share of attention is the activity in futures trading on the commodity exchanges. In seven key commodities—rubber, silk, hides, copper, tin, lead, and zinc—the aggregate volume of contracts transacted in the first six months of 1937 amounted to 119,707. This compares with only 96,465 such transactions during the entire year of 1936. If that pace is maintained throughout the balance of the year, it will mean practically two and a half times the volume recorded last year. Only in the case of tin did this ratio hold untrue; in each of the other six commodities the situation was virtually the same.

Some of this activity was of course that of professional speculators, who are at their busiest in times of rapid price fluctuation when the real buyers are content to stay on the sidelines. A good proportion, however, was the prudent hedging of purchases by consumers to assure their price position, and *bona fide* commitments for future supplies in markets where the spot situation has been tight and uncertain. It is of more than passing interest to note that quotations on relatively distant positions have been generally accurate indicators of trends, where the spot market has been confused and highly conjectural. Sensitive to basic economic factors, but relatively free from the emotional and tactical influences that sway the spot position, these quotations have enabled purchasing agents to clarify the long range view in spite of current disturbances.

A third factor now making for greater price stability is the fact that the extended decline in producers' stocks has apparently run its course, and a moderately increasing trend may be expected to develop over the near term. Inventories in the hands of manufacturers and of consumers are approaching more normal levels, with a consequent condition of balance between production and use. For the first time in many months, the backlog of unfilled orders may be read at its face value, representing a real demand for goods and a smoother, assured production program. All these are signs of excellent business health.

STUART F. HEINRITZ, EDITOR

EDUCATION

From the Top Down . . . or from the Bottom Up?

IN OUR PURCHASING magazines we read much about the education of purchasing agents toward the improvement of their function and their own ability to serve. We read books on the subject with the same end in view. We attend our annual conventions and absorb from our colleagues much real wisdom based on their years of experience. They speak at length on relations with selling organizations, on spending money to save money, on business trends, on the functional operation of our departments, and on all of the other phases of our daily business life which we use as the tools of our profession. Education. Education for ourselves, to the end that we may become more proficient. This is all constructive and necessary.

Then we set about to put into practice what we have learned. When we succeed, as we sometimes do, we must in the majority of cases, be content only with the knowledge that we have accomplished this or that thing we set out to do. There is no flourish of trumpets to hail our efforts that are never spectacular compared with the feat of a salesman who produces a large order, or of the production department that exceeds its own previous record for volume with decreased costs.

Some of us with the ability to express our ideas and opinions in so favorable a manner as to have them set into print, may modestly place upon the desks of our superiors these brain children of ours, or do the same with the creations of others of our profession that appeal to us and which help to plead our cause. These are returned with a remark to the effect that they are very interesting or some other comment leaving us much deflated and wondering after all why we did it.

Are these the only attempts to be made at education in our field—these and the courses we so studiously pursue, and our Round Table discussions at our association meetings? I do not think so. In an editorial in the October, 1936 issue of PURCHASING there appeared the following paragraph:

"It is no disparagement to suggest that another important educational objective is still unattained in any truly broad sense—an understanding of the procurement function not only on the part of buyers but by business executives generally. Purchasing, however proficiently done, cannot achieve its highest service to a company unless coordinated with the general management policy as a basic and integral part of the plan. We hesitate to use the terms 'recognition' or 'appreciation' of the function, because they connote a certain measure of self interest on the buyer's part, whereas it is the interest of management that must be served. Up to this point, education in purchasing has been largely of the buyer, by the buyer, and for the buyer. In this further step it must be of the buyer, possibly to some extent by the buyer, but definitely for management."

M. C. RIDER

Purchasing Agent
Willson Products, Inc.
Reading, Pa.

The last two sentences hold a very definite challenge to us to answer the criticism we hear and make so often—that business executives as a whole are not yet aware nor take full advantage of, the potential value existing in their purchasing departments.

How are we as individuals going to accomplish this "education in purchasing—for management?" With few exceptions, and it is by these we are encouraged, management does not read the articles on purchasing that we read. It does not study the books we study. It is not necessarily out of sympathy with, but lacks a comprehensive understanding of our problems in its behalf, of our principles, and of our procedures.

In proof of the premise (which is not needed) that management in general has not a full understanding of the procurement function, there was presented on these pages some time ago an article embodying the combined opinions of some of those foremost in our profession. These were gathered from their writings and talks covering a period of years and all pointed to that conclusion. This is mentioned to remind the more fortunate of our readers who do not operate under the handicap of this lack of understanding by their management, that the opinion previously expressed and reiterated here is not alone that of the present writer. Only recently this question was being discussed with one of the chief executives of a large company and when the subject of lack of perception was raised, the reply came back quickly, "No. It is not understood. There is too much chiseling in buying."

This attitude of management is a normal outgrowth of the great emphasis on production problems, increase of output, lowering of production costs—all of which are directly associated with the equal concentration upon sales efforts to absorb the accomplishments of production. As one catches up with the other, the laggard is spurred on to excel the leader. There is no time to devote to the purchasing department, whose sole function under such policy is to get materials and keep them coming. Keep the price down when you are on the inside looking out—the price up when you are

on the selling side; and how can the purchasing department, which is of such comparatively recent origin, take over functions that were not theirs in the beginning? This is a philosophy, if it can be called such, many of us meet, chafe under, and wonder how it can be changed.

It can be done. It is being done. It may not be done quickly, but during its accomplishment we as individual purchasing agents can not only strengthen our own positions but gain the cooperation and understanding of the other departments we deal with to a greater extent than exists at present in many instances. In doing so, we can make our own work easier and more effective. The old saying that the wheel that makes the most noise gets the grease, is not a good one for us to follow individually. The chances are, the noisy wheel will eventually be discarded for one that runs quietly and which, although not adding materially to the speed of the industrial vehicle, at least does not hold it back.

Education is a slow process. "This further step must be *of* the buyer—*by* the buyer, but definitely *for* management." It must be "coordinated with the general management policy as a basic and integral part of the plan." How is this to be done? It is not as difficult or as complicated as it may seem. First of all—it is our duty to attempt to understand fully the problems of management, for even though we may not always be taken into their confidence, we should be familiar with them as far as it is possible for us to be, in order to adjust ourselves and our individual policies in conformity with them.

It has long been agreed that the purchasing agent enjoys a privilege not held by any other of his fellow executives: that of being brought into contact with all other departments at some phase of practically every transaction he originates. Here then, would seem to be the key to the situation. If you find that you cannot learn all that you should directly from management, much can be accomplished indirectly (but not surreptitiously, however) through department heads you work with. A frank discussion of their problems as they may be related to the service the purchasing department is expected to give them, will divulge much that can be employed to your mutual advantage.

It may seem hard for some to believe in the necessity for seeking them, but conferences with production managers will disclose plans that directly affect the work of the purchasing department. Similar talks with the sales executive will frequently bring to light plans requiring long term advance work by purchasing. This information will eventually work through to you even if you do not seek it, by virtue of the fact that sooner or later you are called upon to provide the materials and supplies to support these plans. But if you can learn about them early in the game (as you should from the proper source) you are better prepared to move quickly when the right time comes, having had the opportunity to lay your ground work beforehand.

You will ask how to gain the confidence necessary



M. C. RIDER

for the discussion of these problems? The answer is, by the service of your department to the others so that they will realize fully to what extent the carrying out of their policies depends upon your understanding of them and what is required of purchasing to insure their success.

Again you will ask, how is this to be done? Not with honeyed words to be sure, but by fulfilling to the uttermost the phases of your department's functions in a manner that cannot help but bring attention to them by the completeness of their accomplishment.

To be specific with a simple example: Production tells you through a requisition or memorandum that they are going to need a large quantity of a certain material within a specified time. Neither they nor Sales have your contact with market conditions affecting this or other commodities. You can do one of two things: handle the order in the routine way, keep to yourself the information you get regarding deliveries, the state of the market and other details and wait to be asked for the information. In other words, make them come to you for it. Or you can, before placing the order, go to the production manager and talk frankly about it, explain that deliveries are lengthening out, prices rising and suppliers handicapped by labor or other difficulties with which you are familiar. You tell this in the spirit of wanting them to know beforehand

what you are trying to overcome to insure prompt delivery. You ask if this order is only part of the full requirement for this item or final. If you do not appear too "nosey" and are sincere in your approach, you will learn just what you wanted to know.

You can then go to Sales and explain what has taken place between you and Production in connection with this item. Sales may at first tell you they are not interested because their job is selling and if only Production would keep their end up, all would be plain sailing. Your cue is of course, that Production cannot make good unless your own department does and you are trying to get, as well as to give, the entire picture. This will perhaps be hard to do for a few times. The bitter part of this pill is that it should have to be done at all, but since it seems necessary for the accomplishment of your purpose, it should be done straightforwardly, graciously and unhesitatingly.

Then, when you have placed the order and are given a delivery promise, tell them. Follow that promise with your supplier and keep your own people posted constantly. Advise them of any default with the reason for it and then let them know that you are on the job keeping after it. If the supplier says he will ship in ten days, do not tell Production that the material is on the road unless you know that it is. By these little things you will gradually build up a reputation (if you need one) for the dependability of your department, and you will in time be sought by your fellow executives for your advice and suggestions before they crystallize their own plans.

Another case: the superintendent, who should have remembered but did not, 'phones and asks if a certain item you ordered yesterday was the one he wanted to change slightly in design before replenishing stock. You refer to your records and tell him it was not, but that you have a memorandum from him asking you to consult him before ordering a similar item. The superintendent is greatly relieved because he was responsible for the requisition covering yesterday's order. He forgot. You did not. He remembers this and in time begins to depend upon you to help him out in matters of this kind. If you have not already done so, you will find that you have to do a great deal of thinking in addition to your own in the purchasing department.

Here is another instance. You buy a certain gadget in large quantities to be used with another part that is made in your own plant. Thousands of them are received and suddenly a wail arises from the assembly line that the gadgets do not fit. Please note—the *gadgets* do not fit. There is never any question about your own product! You do a little detective work, get a handful of gadgets, another of parts. You find that they do fit, perhaps not as perfectly as they might—usable but a little harder to handle than they should be. Do you tell Production that your own parts and not the gadgets are at fault? Not if you are wise.

The parts you buy are made locally so you send for the salesman, merely telling him that something is wrong in the assembly of the two items. He arrives with

a blue print. You send for your production man. The salesman diplomatically proves that his gadgets are correct and that there is a slight difference in dimensions with the parts you make in your own factory. The production man finds it is true but not serious. His attitude toward the supplier changes at once, as it does toward you also. What will be the effect the next time he has a complaint to make to you?

One more for the book. For months you have been watching the labor situation in an industry supplying one of your most important materials. You have covered tentatively, with a quantity that is about as large as you care to handle without the sanction of the management for further commitments. It runs into real money. You reach the general manager, lay before him your recommendations for obtaining at least a five months' supply, which has never been necessary before. You explain your reasons fully. He approves with the reservation that he is leaving to you the time for calling the material in. A few days later the salesman for this commodity calls and tells you that something is going to break in a few days. You trust him because of your long established relations. You order the five months' supply to be shipped at once.

Your next step was to advise your Treasurer that the invoice for this will be for so much, payable at such a time and because of its unusual size, believed he should know about it in advance. Of course he hates to spend the money; raves like Fred Allen and shouts something about, "Why doesn't somebody tell me about these things?" Finally he calms down when he learns that the expenditure has been OK'd by the management. He is actually appreciative of your advance information!

But the best part of this entire incident is, that two days after your order was shipped, not only the plant from which you bought but the entire industry closed down with a strike for over three months. When operations resumed, their prices were naturally higher. Yes, these lucky breaks do happen sometimes. What sort of an impression did this make upon those you approached before placing the order?

All of these examples are of course elementary. Others of a more important character might be cited, for they all have actually happened. But the least spectacular have been used to indicate in what small ways we can begin to accomplish the end we are attempting to reach. They are related to show what we mean by selling the value of the purchasing department to the other departments you serve.

That sort of thing cannot go on indefinitely without some of the results gradually beginning to seep through to the executive office. If your plans are properly laid and carried out, even those higher up will in time begin to notice what is going on and when it is understood that these things are having a definite effect on the balance sheet, as only the most blind will fail to see in time, you will have made at least the initial step toward education for management. But so much depends

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SILHOUETTE STUDIES

17: George Leonard Meyer, Jr.

LIFE HAS PLENTY of knocks for all of us, one of which comes when Opportunity is standing at the door. The only way to be certain of not missing that all-important summons is to answer them all with a cheerful smile.

George Meyer isn't sure just which one incident of his early business experience represented Opportunity's knock. He has a suspicion that it came in the form of a request to clean up the chief's desk, back in his office boy days, for he still remembers the commendation he received for a job that was neatly and thoroughly done — and finished off with an extra polishing of the glass top that wasn't mentioned in the job specification. Then again, it might have been any of a dozen other circumstances, for he tackled every job, big or little, with the same enthusiasm, though he realizes now that his qualifications for some of these varied assignments were less adequate than his skill as a desk polisher.

Being of a lively, inquiring turn of mind, he wasn't satisfied with merely filing papers or shining up implements. He wanted to know what they were all about, and with characteristic directness he asked a lot of questions. If he sometimes tried the patience of his seniors in this way, at least he registered with them his presence and his personality. And out of that chain of circumstances, he has had the very satisfying experience of knowing that his efforts were noticed and appreciated, and business progress has naturally followed.

GEORGE WAS BORN in Chicago, March 26th, 1891. His boyhood and family background were typical of thousands of American youngsters — solid, normal, unspectacular. His father was of German descent, hard working and

ambitious for his family. He owned and operated his own dairy business, and it was here for several summers that George received his first business training. It was obvious that the boy would have to make his own way, but he was given the advantage of two years in high school, followed by a year at the Illinois College of Commerce. This he supplemented, on his own initiative, by a correspondence course in commercial law.

At the age of sixteen he landed his first job, with the Chicago Flexible Shaft Company. The position had an impressive title — Manager of the Repair Department. It developed, however, that the actual duties were of a more humble nature than the title implied. It was his responsibility to tie together correspondence and shipments of horse clipper blades, sheep shearing knives, and other parts sent in by farmers and dealers for sharpening or repair, and incidentally, in this process, to remove some of the farm refuse usually accompanying such parts.

There must have been something noteworthy about the manner and the spirit in which this somewhat undignified job was done, for about a year later the president of the company, Mr. J. K. Stewart, invited the young man to become a bookkeeper in one of his other enterprises, the Stewart & Clark Manufacturing Company.

George had studied bookkeeping in his commercial course, but had no practical experience. Nevertheless, he undertook the new assignment with characteristic eagerness and zeal. For the next year he was busily engaged in the miscellaneous tasks of general accounting, making up the payroll, serving as bank messenger, and getting his first contact with purchasing work by checking the invoices and re-

ceiving records. By steady application he mastered the details of the unfamiliar work, and once more it became apparent that his efforts had won favorable notice as management decided that he was ready for a bigger place in the organization.

THE COMPANY AT this time was entering a period of rapid growth, and the simple, informal set-up was no longer adequate for carrying on the expanding operations efficiently. One feature of the proposed departmental reorganization was the centralization of purchasing, which had grown to considerable volume. Young Meyer was picked for the job of setting up and heading the new department.

The mere fact that he had no actual experience in buying, and that there was little information then to be had on the subject, was no deterrent. He cheerfully tackled the problem, cultivated the acquaintance of a few other purchasing men, and began to build a system adapted to the conditions as he saw them. It was soon apparent that he had found a place for which he was eminently fitted.

His familiarity with company policy and accounting methods stood him in good stead. He found further aptitude for the job in his excellent memory and his ability to handle detail through orderly and systematic procedure.

As he got into the actual buying, he developed two more principles which have guided all of his contacts and relations with visiting salesmen. They are inherently characteristic of the man, and were in a sense to be expected, but his personal exemplification of these qualities over the years has been such as to make him one of the most respected and well liked buyers in the Chicago territory.

The first of these is his unfailing courtesy, expressed in a prompt reception, a genuinely friendly smile, and a cooperative attitude in listening to the sales story even though there is no immediate prospect of using such material. The company has grown to a position of size and leadership in its field, and a constantly increasing stream of salesmen come to its offices in search of business, but neither the pressure of time nor the position of enhanced prestige has affected this basic policy. The purchasing department of Stewart-Warner is distinctly approachable. Cub salesmen in particular find the experience of a call at these offices refreshing, encouraging, and reassuring. There can be little doubt that this outstanding example has done much to raise the general impression and regard for all purchasing men.

The second point is a strict policy of honorable dealing. Salesmen know that Meyer is thoroughly on the level with them as well as with his own company. They have complete confidence in what he tells them, and faith that their own representations will not be improperly used. That has paid good dividends in loyalty, frankness, and cooperation on the salesmen's part.

IN 1912, THE COMPANY consolidated with the Warner Instrument Company of Beloit, Wisconsin, speedometer manufacturers, and Meyer was named purchasing agent of the resulting Stewart-Warner Corporation. Nine years ago the title was changed to Director of Purchases, a more accurately descriptive term, for the function had expanded to embrace several related responsibilities, including the direction of factory scheduling and material control, the raw materials and other storerooms, and the receiving division. In 1933, traffic was added to this list.

Besides these duties, he is a member of the company's Release Committee, along with sales, production, and management officials, charged with estimating requirements and authorizing production schedules on newer products such as radio

sets, electric refrigerators, and Ale-mite garage equipment, which are not made to customers' specific orders but present a general problem of marketing analysis and distribution. Thus George stands as one of the real key executives of the organization.

WHEN MEYER CAME INTO purchasing work, there was no association at Chicago, and professional consciousness of buyers as a group had not yet awakened. During the early years of his experience, however, the Chicago Association of Purchasing Agents was formed, and he was prompt to identify himself with the project. Though not actually an organizer or charter member of the group, his membership dates back to the time before it became affiliated with the National Association, and in this sense he is a real pioneer.

He took an active part in association work from the start, and his interest, ability, and genial good nature in dealing with people presently led to his election to the Board of Directors. He has not been out of harness since. When the national convention came to Chicago in 1920, he was chairman of the finance committee, and became General Convention Chairman in 1930, when Chicago again played host to N.A.P.A. Mean-

while he has carried out a variety of committee assignments, served a term as president of the Chicago group, and was chairman of the committee that drew up the revised constitution of N.A.P.A. In 1934 he was elected to the national executive committee as Vice President for District No. 3.

HIS INTERESTS, HOWEVER, have not been circumscribed by business considerations. In 1913 he married Miss Myrtle Faubel, and they established a home in the River Forest section. There, George served for four years (1919-1923) as a member of the Village Board of Trustees, and for six years (1930-1936) as trustee of the Presbyterian Church. He is also a member of the Ridgemoor Country Club of Chicago.

He has one son, Edward, 19, who has just completed his first year in the law course at Northwestern University, thus getting a running start toward the professional equipment and training that his dad dug out in long evenings alone as a student of the International Correspondence School. While the boy was growing up, George became interested in Scout work, and still spends some of his time in this activity as a member of the Scout Committee and out on camping trips with the youngsters.

Within the past few months he has bought a new home at River Forest, where he will have additional opportunities for working at his real hobby of flowers and gardening.

George Meyer is essentially a self-made man in the best sense of the term — one who has advanced through merit, initiative, loyal and effective service in his company and his profession — one who started without the benefit of influential connections or extensive formal education, but who has acquired both through the force of personality and perseverance. His department, too, is "self-made" — the sort of practical development toward a high standard of business and professional practice that is the backbone of modern purchasing.

—S.F.H.



A sales executive visualizes the great possibilities of marketing—not only TO but also THROUGH the purchasing agent

Some Purchasing Agents Are Stepping Out!

CY NORTON

Strathmore Paper Co.

TO THEIR MAJOR FUNCTION of buying, some purchasing agents are now adding a second function of inestimable value to their company. They not only buy, they *sell*!

Let's quote some cases to demonstrate. And then let's investigate their various opportunities.

Case No. 1. A salesman called upon a manufacturing company, told his story well, suggested how his products could benefit the purchasing agent's company. The purchasing agent listened attentively, asked pertinent questions, and during the discussion briefly explained his own merchandise, some of its particular advantages and some of its major uses.

Result? The purchasing agent did not buy from the salesman and has not done so up until this time. But ten days later, in came a letter from the salesman saying casually that his company had decided to standardize on the purchasing agent's product, and in a call on another prospect, the salesman had had an opportunity to say a good word about the purchasing agent's company and this prospect would likewise specify the same merchandise. No mention was made of reciprocity!

What had happened? In addition to his duty of listening and buying for his company, this purchasing agent had done an expert job of selling!

Case No. 2. Here are excerpts from an actual conversation:

PROSPECT—What do you know about the Company?

SALESMAN—Not much except they don't seem to be very alert.

PROSPECT—What makes you say that?

SALESMAN—The purchasing agent, Mr. Jones, is the only one I know in the company and he won't even listen to a full story of a new product that I am absolutely sure would improve their own merchandise.

I don't mind people not buying our goods after an investigation, but when they refuse

even to hear our story or the story of any new product, it seems to me their products must suffer. Mr. Jones said to me, "We have used one product for 23 years and if it has been good enough for all that time, it is good enough for today." Meanwhile, times have changed, products have changed, new inventions have appeared, and the product they have been using and now are using is very definitely not the best today. Consequently, I certainly wouldn't be inclined to use or even recommend their product because I feel that some competitor might easily have a better product.

So what? Mr. Jones was perhaps right in his buying practice, but his attitude was such that in this and perhaps other cases, he was hindering the recommendation and perhaps the sale of his own company's products.

The question now before us is: Can purchasing agents add another important phase to their purchasing functions? In many cases, yes. Let's see how it is being done and can be done.

The waiting room for salesmen in one company is decorated with wall exhibits of the products made by the company. The products themselves are also placed on tables to invite examination by visiting salesmen. Advertisements, too, are about the room pointing out the special sales points of the product.

What happens? While waiting for his interview, the salesman gets a chance to absorb something about the company, its merchandise, its outstanding values, and its uses.

Here's a reverse case: A New York publisher of a smart magazine has no identification of the company anywhere except on the door. No copies of its intriguing magazines to read. No exhibits. Just chairs,

blank walls, and the phone operator. A missed sales opportunity!

In another case, the purchasing agent at the end of the interview passes a printed folder to each salesman saying in effect, "Put this in your pocket and read it sometime. It may be of interest to you since it tells a brief story of our company, our merchandise and its use. The more you know about our story, the better you will be able to suggest uses for your own products."

In a third case, the purchasing department receives salesmen in a large room where the walls are adorned with interesting exhibits to arouse the salesmen's interest. The purchasing agent says, "Why not have a little company atmosphere around a purchasing office? When I get a phone call or some one interrupts an interview, I notice the salesmen looking at our exhibits and when they do that, they are absorbing a little knowledge about our company and our products which they may occasionally pass along to people in their travels. Such word-of-mouth advertising is invaluable, I believe."

A fourth purchasing agent says this: "It is quite surprising how much indirect selling a purchasing agent can do. I try to do it by explaining why we need for our products a consistent high quality of raw materials, real uniformity, exactly the right colors, the proper strength, etc.

"Salesmen always listen because it gives them a

better idea of our needs. But meanwhile, they are learning what a meticulous, reputable manufacturer we are, and how fine our products are. Many times these salesmen have a chance to say a good word for our goods, and frequently I hear of orders that come to us as a result."

A fifth company has samples of its products on tables with a sign to salesmen reading, "Take one." What a fine way to get free sampling without any distribution cost! Particularly for tobacco, gum, candies, novelties, soap, *et cetera, et cetera*.

A sixth purchasing agent states, "I don't deliberately try to sell our products to salesmen except that by being courteous and attentive to the men, I probably create some good will toward our firm. One salesman inadvertently told me some months ago that a certain company 'may make a good product but I would never recommend it!' Finally, I drew out of him that his antagonism was caused by a somewhat intolerant and disinterested reception in the purchasing department.

"It is just as easy to be polite and courteous as it is to be gruff and disgruntled and we never know when a salesman traveling around the country can say a good word to help bring an order to us, or say harmful things that may result in our losing the order. It is better to have friends than enemies and it's a lot more fun."

Now let's look at some statistics to see if they can shed more light on this matter.

If a purchasing agent sees 1,000, 2,000 or 10,000 salesmen a year, he oftentimes can convert some of them into word-of-mouth advertisers for his company and merchandise. Now suppose that each salesman makes a minimum of four calls a day and we find that each salesman will make about 1,200 calls a year.

Suppose further that a purchasing agent receives 2,000 salesmen a year and he can get 10% of the men to be personally friendly and disposed toward his company and merchandise. That would be 200 salesmen who make (four calls a day) 24,000 calls a year.

Frequently, these salesmen on the aggregate of 24,000 calls could and might say a good word to influence someone toward a certain product. And such personal recommendation or word-of-mouth advertising is exceedingly effective and is *absolutely free!*

Accordingly, many purchasing agents are enlarging their scope of activities. They are adding salesmanship to their buymanship.

Their purchasing functions are still of major importance but their salesmanship is also a helpful asset to the company.

These purchasing agents are really stepping out. They are enlarging their field of activities. They are annexing another opportunity. They do two jobs instead of one. Briefly—

1. They buy.
2. Also, they sell!

Fractional Horse Power ELECTRIC MOTORS High Performance • Low Price



DEPENDABLE performance at satisfactory low cost. Made by specialists for a generation in manufacturing light electric motors. Use them in automobile and bus heaters—juice extractors—kitchen mixers—electric drills—hand vacuum cleaners—other light apparatus. Reversible types for automatic radio tuning. Every motor precision-built for long, trouble free service.

Write us about your motor requirements. Be sure to specify required power, speed and voltage.

The GENERAL INDUSTRIES CO.

3743 Taylor Street

Elyria, Ohio



7: Textile Statistics

HAROLD A. KNIGHT

FOOD, CLOTHING, AND SHELTER are the basic needs of mankind. Surely, therefore, one of this series of articles on business barometers must deal with one or all of these vitals. In all previous barometers discussed there has never been a lack of statistics by which to guide him who may read, with the possible exception of retail sales, for which figures are comparatively new and undeveloped.

Yet here is the textile industry, comparable with the great steel industry, rather lacking in broad, comprehensive, prompt and regular statistics to show which way the textiles are blowing. During the halcyon (?) days of NIRA, the Cotton-Textile Institute supplied statistics which were good enough, but when the Blue Eagle flew away to far and eerie crags, the follower of the textile industry had to shift for himself, at least where he must have his figures weekly.

Thus the New York *Times* index of business activity abandoned for a time the inclusion of textile statistics, at the time that NRA folded up, but later resurrected a division of "cotton mill activity" which they secured from "confidential infor-

mation," though stating that "the index of cotton mill activity is undoubtedly the weakest component from the standpoint of percentage of activity represented by the confidential reports on which the index is based. Yet it is fairly representative of conditions in the entire industry."

There are apparently no single sets of statistics in the textile industry which correspond with ingot production figures of the steel industry. Thus in the latter the open-hearth furnace is the bottleneck through which all steel must pass, and there are not too many such furnaces to defy counting accurately each week. On the other hand there are 1,100 cotton mills, or individual companies, alone.

There are of course trade associa-

tions which give figures pertaining to some branch. Thus the National Federation of Textiles, Inc. and the National Rayon Weavers' Association cooperate in presenting rayon cloth statistics. The National Association of Hosiery Manufacturers in its statistical bulletins estimates shipments of hosiery.

When John Murray, textile editor of the *New York Journal of Commerce*, was asked recently what is the one best barometer of the industry, he stated without hesitation, "unfilled orders for cotton print cloths, expressed in weeks before the orders can and will be filled." When he was asked this question, the manufacturers had six weeks' orders on books, though but a fortnight before ten weeks' orders were so estimated. Print cloths are the greatest outlet for cotton, and cotton is of course the greatest single raw material. There are thousands of cloths made from cotton, stated Mr. Murray.

According to this authority, most of the key facts of the textile industry, such as Mr. Murray publishes in his own paper, are secured "in the trade." Experiences of one

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**Next Month:
Steel Scrap
Statistics**



"That's a wonderful value, all right, but I really ought to go and see that buyer in Peoria"

Classification of Coal

ARNO C. FIELDNER

Chief, Technologic Branch
U. S. Bureau of Mines

IN THE TENTATIVE STANDARD specifications for the classification of coals, approved by the American Society for Testing Materials and the American Standards Association, coals are classified according to their composition and properties along three different lines:

- (1) By variety or type.
- (2) By rank, or according to the degree of metamorphism by geological processes, as manifested in the series from lignite to anthracite.
- (3) By grade, or by quality as determined by calorific value, ash and sulphur content, ash-softening temperature, size, etc.

Definitions of Variety

The criteria for classification are based on the inherent properties and characteristic behavior of different kinds of coal, such as proximate analyses, heating value, caking index, structure and appearance, and purity and resistance to weathering. Most of these factors in the rank and grade specifications can be defined and measured by reproducible laboratory tests. The following definitions for variety are being considered by the Technical Committee on Nomenclature of the Sectional Committee on Coal Classification. They are descriptive and relate principally to the appearance and structure of the coal.

Common banded coal is the common variety of bituminous or subbituminous coal. It consists of a sequence of irregularly alternating layers or lenses of (1) homogeneous black material having a brilliant vitreous luster, (2) grayish-black less brilliant, striated material usually of silky luster, and (3)

generally thinner bands or lenses of soft, powdery, and fibrous particles of mineral charcoal. The difference in luster of the bands is greater in bituminous than in subbituminous coal.

Splint coal is a variety of bituminous or subbituminous coal. It commonly has a dull luster and grayish-black color, and is of compact structure, often containing a few thin irregular bands with vitreous luster. When struck, it is resonant. It is hard and tough, and breaks with an irregular, rough, sometimes splintery fracture. It is free burning and does not swell on heating.

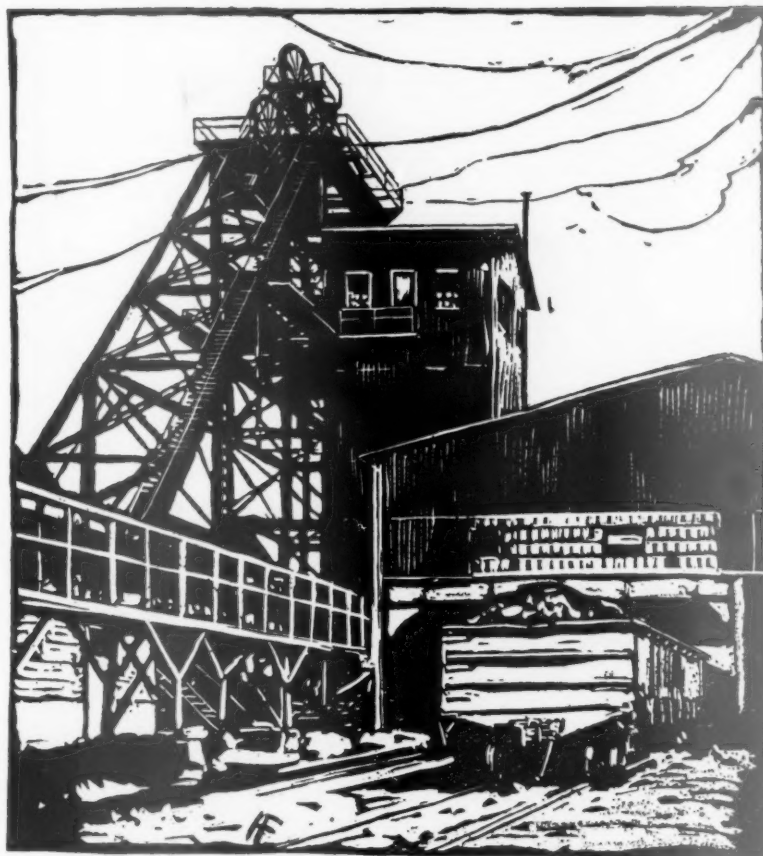
Cannel coal is a variety of bituminous or subbituminous coal of uniform and compact fine-grained

texture with a general absence of banded structure. It is dark gray to black, has a greasy luster, and is noticeably of conchoidal or shell-like fracture. It is non-caking, yields a high percentage of volatile matter, ignites easily, and burns with a luminous smoky flame.

Boghead coal is a variety of cannel coal characterized by a high percentage of algal remains, and upon distillation it gives exceptionally high yields of tar and oil.

Classification by Rank

In general agreement with long-standing American practice coals are grouped in four broad classes called anthracite, bituminous, subbituminous, and lignitic. Anthracitic coal is divided into three



This article has been prepared to provide more detailed information, supplementary to the charts in "Factors Recommended for Consideration in the Selection of Coal," published by the National Association of Purchasing Agents.

TABLE I.—CLASSIFICATION OF COALS BY RANK			
Legend: F.C. = Fixed Carbon, V.M. = Volatile Matter, B.t.u. = British thermal units.			
Class	Group	Limits of Fixed Carbon or B.t.u., Mineral-Matter-Free Basis	Requisite Physical Properties
I. Anthracite	1. Meta-anthracite	Dry F.C., 98% or more (dry V.M., 2% or less)	Non-agglomerating
	2. Anthracite	Dry F.C., 92% or more and less than 98% (dry V.M., 8% or less and more than 2%)	
	3. Semianthracite	Dry F.C., 86% or more and less than 92% (dry V.M., 14% or less and more than 8%)	
II. Bituminous	1. Low-volatile bituminous coal	Dry F.C., 78% or more and less than 86% (dry V.M., 22% or less and more than 14%)	Either agglomerating or non-weathering
	2. Medium-volatile bituminous coal	Dry F.C., 69% or more and less than 78% (dry V.M., 31% or less and more than 22%)	
	3. High-volatile A bituminous coal	Dry F.C., less than 69% (dry V.M., more than 31%) and moist B.t.u., 14,000 or more	
	4. High-volatile B bituminous coal	Moist B.t.u., 13,000 or more and less than 14,000	
	5. High-volatile C bituminous coal	Moist B.t.u., 11,000 or more and less than 13,000	
III. Subbituminous	1. Subbituminous A coal	Moist B.t.u., 11,000 or more and less than 13,000	Both weathering and non-agglomerating
	2. Subbituminous B coal	Moist B.t.u., 9,500 or more and less than 11,000	
	3. Subbituminous C coal	Moist B.t.u., 8,300 or more and less than 9,500	
IV. Lignitic	1. Lignite	Moist B.t.u., less than 8,300	Consolidated
	2. Brown coal	Moist B.t.u., less than 8,300	Unconsolidated

TABLE II.—SYMBOLS FOR GRADING COAL ACCORDING TO ASH, SOFTENING TEMPERATURE OF ASH, AND SULPHUR (ANALYSES EXPRESSED ON THE BASIS OF THE COAL AS SAMPLED)

Ash		Softening Temperature of Ash		Sulfur	
Symbol	Per Cent, Inclusive	Symbol	Deg. Fahr., Inclusive	Symbol	Per Cent, Inclusive
A4	0.0 to 4.0	F28	2800 and higher	S0.7	0.0 to 0.7
A6	4.1 to 6.0	F26	2600 to 2790	S1.0	0.8 to 1.0
A8	6.1 to 8.0	F24	2400 to 2590	S1.3	1.1 to 1.3
A10	8.1 to 10.0	F22	2200 to 2390	S1.6	1.4 to 1.6
A12	10.1 to 12.0	F20	2000 to 2190	S2.0	1.7 to 2.0
A14	12.1 to 14.0	F20 minus	Less than 2000	S3.0	2.1 to 3.0
A16	14.1 to 16.0			S5.0	3.1 to 5.0
A18	16.1 to 18.0			S5.0 plus	5.1 and higher
A20	18.1 to 20.0				
A20 plus	20.1 and higher				

The standard method for designating the sizes of coal are given in the Proceedings of the American Society for Testing Materials, Vol. 36, Pt. 1, 1936, pp. 819-22.

groups, designated as meta-anthracite, anthracite, and semianthracite; bituminous coal is divided into five groups called low-volatile, medium-volatile, high-volatile A, high-volatile B, and high-volatile C bituminous coal; subbituminous coal is divided into three groups called subbituminous A, subbituminous B, and subbituminous C coal; and lignitic coal is divided into two groups designated lignite and brown coal.

The basic scheme of classification is according to fixed carbon and calorific value (expressed in B.t.u.) calculated to the mineral-matter-free basis. The higher-rank coals are classified according to fixed carbon on the dry basis; and the lower-rank coals according to B.t.u. on the moist basis, that is, containing their natural bed moisture but free of visible surface moisture. Agglomerating and slacking indices are used to differentiate between certain adjacent groups. Calculation to the mineral-matter-free basis is specified for the classification by rank because mineral matter is a variable diluent which is related directly to the properties of the coal substance. The details and boundary lines of classification are given in Table I.

Classification by Grade

These specifications cover the classification of coals according to quality as expressed by the ash and sulphur content, ash-softening temperature and size. Oftentimes, in practice, the calorific value of the coal as received is used as a standard of the grade of coal, but this value should not be confused with the moist or dry mineral-matter-free B.t.u. used in the classification of coals by rank. The impurities, ash and sulphur, usually can be reduced by cleaning processes and in many but not all cases the fusing temperature of the ash is changed by removing impurities from the coal. The rank of a coal seldom is changed by variation of impurities or size of a coal, although in some borderline cases cleaning or sizing may shift the rank of a coal.

Continued on page 45

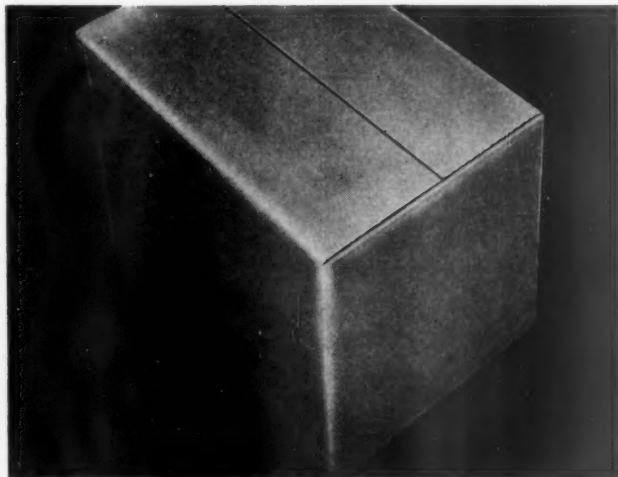
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F. O. B.

(Filosofy of Buying)

Things We Never Knew Till Now

-That the canned sales talk was invented primarily as a check rein upon salesmen's imaginations.
-That the business cycle has four speeds forward and no reverse.
-That C.I.F. and F.A.S. are not departments of the federal government.
-That the greatest authorities on how to sell are all purchasing agents and the greatest authorities on how to buy are all salesmen.
-That a certain salesman, appointed purchasing agent for his company, sits in his own anteroom an hour every morning before going in to work, just from force of habit.
-That some of those paragons who never make the same mistake twice are particularly adept at finding new ones to make.
-That some companies that demand strict proof of honesty in hiring a p.a. make very little effort to keep him that way.
-That purchasing efficiency is more accurately measured by the things that are not bought than by the things that are.
-That though many a true word is spoken in jest, even more foolish ones are spoken in earnest.

Add to the list of obsolete material: Mark Twain's famous remark about the weather, which is quoted at least three times by speakers on every convention program (ten year average—4.88). The air conditioning people are doing a lot about it, as well as talking about it.

SARTORIAL NOTE: *What the well dressed purchasing agent will not wear.* The Purchasing Agents Association of New Orleans, at a solemn business meeting last month resolved to dispense with the wearing of coats during the summer season. The mean average temperature at N.O., if we recall the convention publicity of 1936 correctly, is distinctly on the coolish side (?). Proponents of the resolution (it was unanimously carried) point out the excellent precedent to be found in the police department and the streetcar service, and express the pious "Whereas" that because of their greater comfort, the coatless p.a.'s will be able to do a much better job. And just to show themselves big-

hearted, they go on to extend the new freedom to visiting salesmen as well.

According to the Old Line Buyer, this ever-normal granary that Secretary Wallace has in mind is child's play compared with trying to maintain an ever-normal inventory.

SELLERS' MARKET tactics at Raleigh, N. C.: The Wake County Alcoholic Beverage Control Board opened the county's first liquor store this month, but did not encourage customers. We are informed that Board Chairman Henry E. Litchford has decorated the new establishment with Anti-Saloon League posters, and issued the following sales talk: "It is not our business to see how much liquor we can sell. In fact, we're going to see how little we can sell. A big crowd and a lot of customers on opening day is just what we do not want." Let's see, who was it that said the first rule of salesmanship is to believe in your product?

August Selling

The salesman made twelve calls per day
In hopes of catching the P.A.
The law of average could not fail
By this plan to produce a sale.
But sad to say, the law does not
Work as it should when weather's hot.

For P.A. Number 1 was out
A-wooing the elusive trout.

And Number 2 was safe from harm
Back with the old folks on the farm.

And Number 3 had taken ship
Upon a 10-day ocean trip.

And Number 4 was all agape
At bathing beauties on the Cape.

And Number 5 had wandered far
With wife and kiddies in the car.

Such was the tale he heard all day—
Salesmen at work, P.A.'s at play.
Up to the waiting room he'd climb:
"Come back again in two weeks' time."
Alas, that's just when I'm to leave
Upon my own two weeks reprieve.

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A hundred fifteen country plants in six states, large processing and distributing operations, all served by one purchasing office

HOW DAIRYLEAGUE BUYS

THE DAIRYMEN'S LEAGUE Co-operative Association, Inc., is an organization of approximately 35,000 dairy farmers in New York, New Jersey, Pennsylvania, and the western section of Vermont, Massachusetts and Connecticut. The major purpose of this Association is the collective marketing of the milk produced, the proceeds (after operating expenses have been deducted) being returned proportionally to the membership. In a little more than fifteen years, this has grown to be a sixty million dollar business, handling more than two and a half billion pounds of milk annually.

About 55% of the milk is delivered by the farmer to plants of milk dealer customers at wholesale. Some 475 such dealers look to the Association as their source of supply. The remaining 45% of the milk is delivered through country plants owned and operated by the Association. In order to provide an outlet for the total

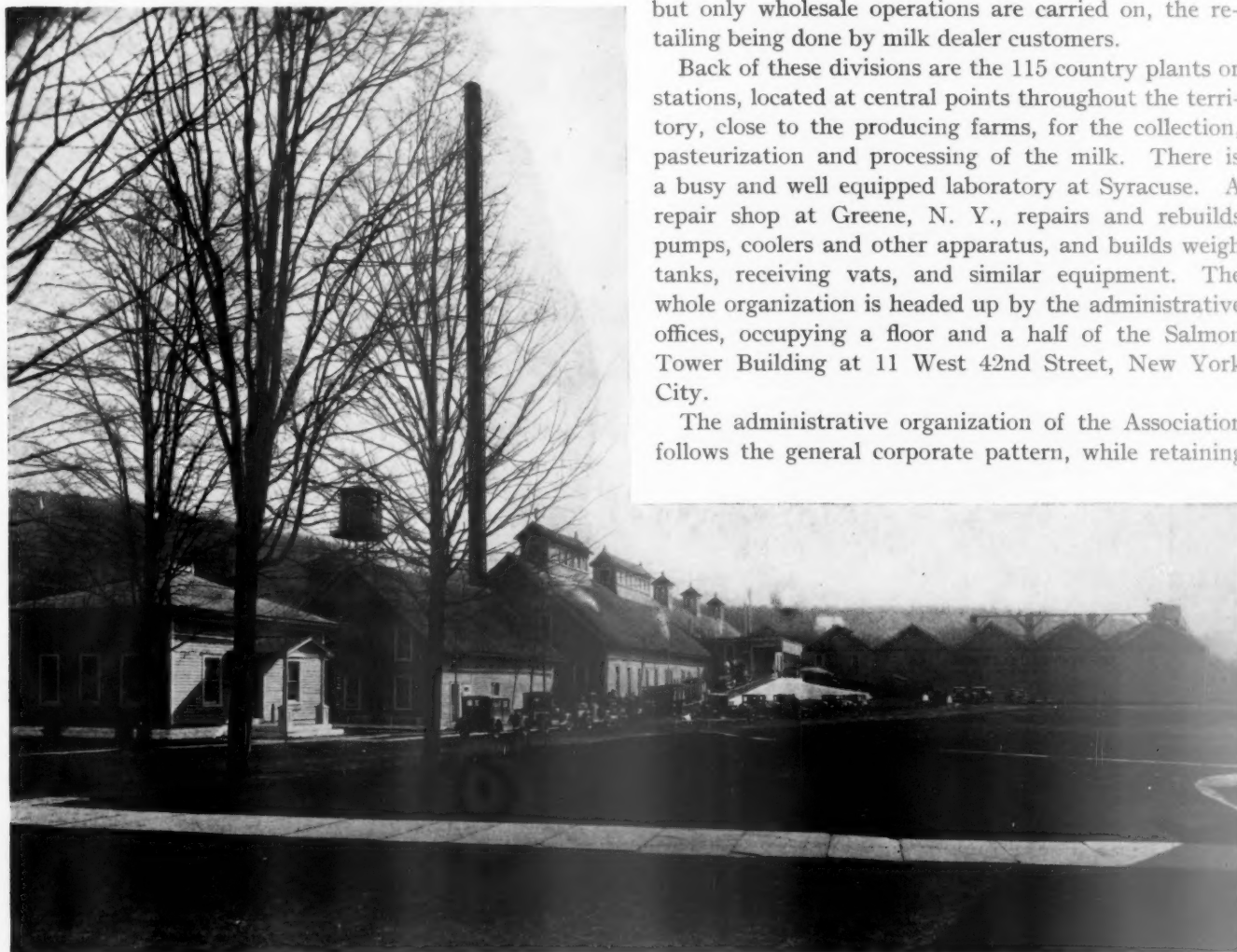
No. 2

in a series of case studies outlining the actual organization and procedure in representative purchasing departments.

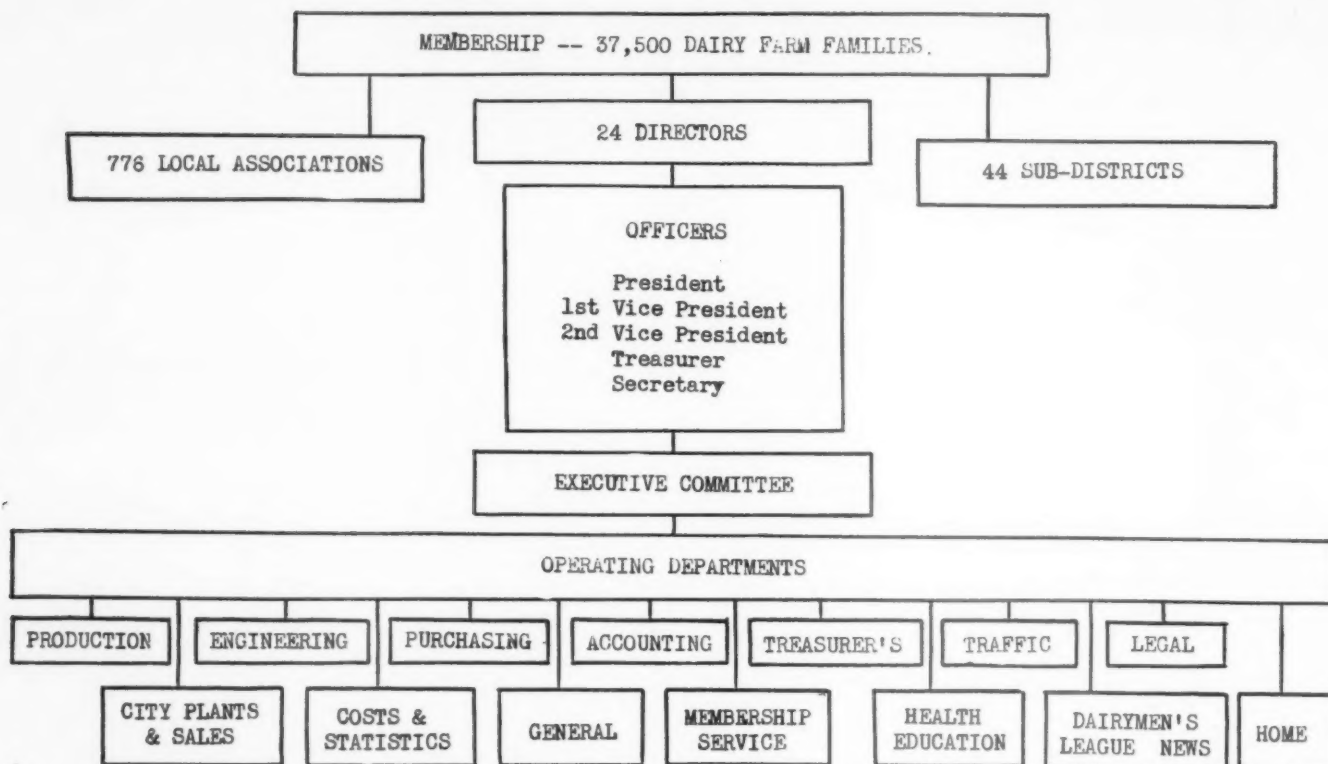
production, the Association operates sixteen distribution branches which handle 390 million pounds of the milk. Some of the country plants dispose of it by wholesale and retail. The Association operates one ice cream plant with its distribution system, and various plants with processes for the production of butter, cheese, condensed milk, casein, and milk powder. On the last named item, the Association ranks as one of the country's largest producers. New York City is naturally the largest market center, and here is the largest single plant unit for bottling and distribution, but only wholesale operations are carried on, the retailing being done by milk dealer customers.

Back of these divisions are the 115 country plants or stations, located at central points throughout the territory, close to the producing farms, for the collection, pasteurization and processing of the milk. There is a busy and well equipped laboratory at Syracuse. A repair shop at Greene, N. Y., repairs and rebuilds pumps, coolers and other apparatus, and builds weigh tanks, receiving vats, and similar equipment. The whole organization is headed up by the administrative offices, occupying a floor and a half of the Salmon Tower Building at 11 West 42nd Street, New York City.

The administrative organization of the Association follows the general corporate pattern, while retaining



Typical of the country plants is this one at Mt. Upton, N. Y.



the very democratic representative character essential to a cooperative enterprise. The membership is arranged in twenty-four geographical districts, each represented by a director. From this board, the corporate officers are chosen, and also an executive committee of five, which has supervision of the management through various operating departments. All the directors, and consequently the executive officers, are practical dairymen, operating their farms like every other member, except that the officers spend all of their time on Association affairs and require members of their families or managers to operate their farms. The operating departments are necessarily manned by a permanent and full-time staff.

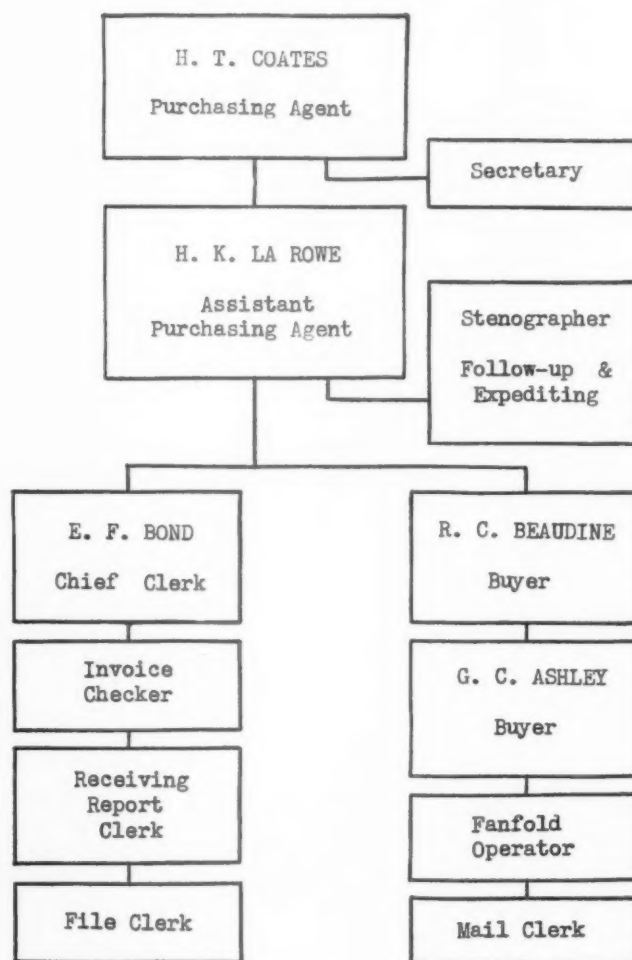
There are fourteen of these operating departments, equal in rank in the organization scheme. One of them is purchasing. Thorough interdepartmental coordination is attained through a coordinating committee of three.

The purchasing department, completely centralized at the New York office, is headed by a purchasing agent and assistant purchasing agent, with ten assistants, including the chief clerk and two buyers. This compact organization handles about three million dollars of purchasing annually.

The division of work is by definite assignment of items to the various buyers, following generally related groups. The purchasing agent supervises the work of the entire department, entering into the actual buying only when market conditions, size or special nature of the transaction suggests it. The assistant purchasing agent buys all types of dairy and general equipment, trucks, gasoline, chemicals and metals, and directs the follow-up and expediting functions. He is also a mem-

Above: How purchasing fits in with other operating departments

Below: Organization chart of the purchasing department



ber of the Systems and Standards Committee, along with the Comptroller, Office Manager, and Statistician, charged with the standardization of forms and office procedure, and the consideration of all new office equipment and new mechanical methods of handling office operations. The chief clerk, who is in charge of office routine, also buys printing and stationery items. One buyer handles ice cream supplies, hardware items, and assists in coal purchasing; the other handles all passenger cars and automotive accessories.

Personnel

Henry T. Coates, Purchasing Agent, is a graduate mechanical engineer from Cornell University. He came to the Dairymen's League in 1923, about two years after the pooling of milk sales was undertaken. Prior to that time he spent sixteen years with the Pennsylvania Railroad in shop and stores work, serving at various times as Assistant Engineer in the Motive Power Department, Assistant Master Mechanic, and Supervisor of Materials for lines east of Pittsburgh. He has had experience in manufacturing industry as the head of his own plant in the metal extruding field, and as Production Superintendent for the Budd Manufacturing Company. He was also engaged in construction work for the Budd Company, and among other activities in this line was engineer in charge of construction for the South Office Building in the Capitol group at Harrisburg. He is a member of A.S.M.E., and has

been active in the work of the Purchasing Agents Association of New York, in which he has held the offices of president and national director, besides serving as Regional Chairman of the N.A.P.A. Coal Committee.

Harold K. La Rowe, Assistant Purchasing Agent, started in the operating division of the Dairymen's League in 1919, at Auburn, N. Y., becoming Assistant Plant Superintendent and assistant to the Division Superintendent. He was assigned to purchasing work at Utica in 1922, and came to New York with the centralization of purchasing the following year. He is a graduate of the Auburn School of Business, and has studied economics at Columbia University. His extensive research in fuels and lubrication won for him membership in the Metropolitan Section of the Society of Automotive Engineers, where he has been active in committee work and has presented a number of important papers. He is also a member of N.A.P.A., and is currently serving as vice president of the New York Association.

E. F. Bond, Chief Clerk, is a graduate of New York University, School of Business Administration. R. C. Beaudine and G. C. Ashley, buyers, came to the League from the Utah Copper Company and W. J. Rainey Company, respectively.

Requisitions

The number, scattered location, and relatively small size of the country plants has made it imprac-

MONTHLY SUPPLY REQUISITION FOR COUNTRY PLANTS				DAIRYMEN'S LEAGUE CO-OPERATIVE ASSOCIATION, INC. NEW YORK CITY MONTHLY SUPPLY INVENTORY FOR COUNTRY PLANTS															
PLANT DATE				DATE															
MATERIAL	VENDOR	PRICE	DATE ORDERED FOR NEXT 30 DAYS	MATERIAL	ON HAND BEGINNING OF MONTH	REC'D THIS MONTH	TRANSFERS FROM	TOTAL TO BE ACCOUNTED FOR	TRANSFERRED TO PLANT NO.	SALES	USED	AMOUNT OF MONTHLY INVENTORY FOR PLANT	PRICE	PER	VALUE	ON HAND END OF MONTH	PRICE	PER	VALUE
Acid, Muratic-20"	City			Acid, Muratic-20"	City														
Acid, Sulphuric-Sp. Gr. 1.825 to 1.828	City			Acid, Sulphuric-Sp. Gr. 1.825 to 1.828	City														
Alkali, Machine for Can Washing-Spec. 199	Bld			Alkali, Machine for Can Washing-Spec. 199	Bld														
Alumina	Ltd			Alumina	Ltd														
Ammonia, Anhydrous 100 lb. Cylinders	Cyl			Ammonia, Anhydrous 100 lb. Cylinders	Cyl														
*Aprons, Light Weight Rubber-Spec. 13	Ex			*Aprons, Light Weight Rubber-Spec. 13	Ex														
*Bags, Burlap for Powdered Milk-100 lb. size	M			*Bags, Burlap for Powdered Milk-100 lb. size	M														
*Bandage, Cheese	Yds			*Bandage, Cheese	Yds														
*Bibs, 55-57 Gal. Oak Condensed Milk-Spec. 18	Ex			*Bibs, 55-57 Gal. Oak Condensed Milk-Spec. 18	Ex														
*Bibs, 15 1/2 x 30 Powdered Milk-Spec. 19	Ex			*Bibs, 15 1/2 x 30 Powdered Milk-Spec. 19	Ex														
*Boards, Cheese	M			*Boards, Cheese	M														
*Bovis, Rubber	Pi			*Bovis, Rubber	Pi														
Bottles, 60 1/2 Cream, 9 Gram	Ex			Bottles, 60 1/2 Cream, 9 Gram	Ex														
Bottles, 8", Milk Test 50 Spec. 95-A	Ex			Bottles, 8", Milk Test 50 Spec. 95-A	Ex														
Bottles, 8" Composite Sample	Ex			Bottles, 8" Composite Sample	Ex														
*Bovis, Cheese	Ex			*Bovis, Cheese	Ex														
Brooms, Corn-Mat-Spec. 34	Ex			Brooms, Corn-Mat-Spec. 34	Ex														
Brooms, Upright Broom	Ex			Brooms, Upright Broom	Ex														
Brushes, Dairy-No. 13	Dur			Brushes, Dairy-No. 13	Dur														
Brushes, Dairy-No. 75	Dur			Brushes, Dairy-No. 75	Dur														
Brushes, Dairy-No. 100	Dur			Brushes, Dairy-No. 100	Dur														
Brushes, Dairy-No. 250	Dur			Brushes, Dairy-No. 250	Dur														
Brushes, Dairy-No. 260	Dur			Brushes, Dairy-No. 260	Dur														
Brushes, Dairy-No. 268	Dur			Brushes, Dairy-No. 268	Dur														
Calcium Chloride-Flake 400 lb.	Drms			Calcium Chloride-Flake 400 lb.	Drms														
*Cans, Cream Storage, 6 gallon Spec. 6A	Ex			*Cans, Cream Storage, 6 gallon Spec. 6A	Ex														
*Cans, Milk Plant 40 quart Farmers	Ex			*Cans, Milk Plant 40 quart Farmers	Ex														
*Caps, White Cloth Spec. 36	Ex			*Caps, White Cloth Spec. 36	Ex														
Charts, Recording Thermometer-Front 142	Yds			Charts, Recording Thermometer-Front 142	Yds														
*Circles, Cheese Cloth-Spec. 41	Phes			*Circles, Cheese Cloth-Spec. 41	Phes														
Clamps, Milk Strainer	Ex			Clamps, Milk Strainer	Ex														
*Cleaner No. 360 Spec. 167	Lbs			*Cleaner No. 360 Spec. 167	Lbs														
*Cleaner No. 360 Spec. 167	Lbs			*Cleaner No. 360 Spec. 167	Lbs														
Tablets, Cor. Sub. No. 2	M			Tablets, Cor. Sub. No. 2	M														
*Thermometers-Flaming Dairy Spec. 119	Ex			*Thermometers-Flaming Dairy Spec. 119	Ex														
Tissue, No. Waste Toilet	Cts			Tissue, No. Waste Toilet	Cts														
Towels, Paper	Cts			Towels, Paper	Cts														
*Unions, Size	Ex			*Unions, Size	Ex														
Waste, Cotton, Colored	Lbs			Waste, Cotton, Colored	Lbs														
Tags	M			Tags	M														

Figure 1. Monthly requisition form for staple items

ticable to maintain central stores. Instead, each of the plants maintains a moderate supply inventory, and most of the material ordered is put into service as soon as received. These supplies are obtained monthly by purchases made against a requisition form (Figure 1) which lists 107 staple items covering the majority of recurring requirements. The form shows the amount consumed, the amount on hand, and provides a space in which the plant manager can note the quantity required for the next thirty days' supply.

This form has been carefully drawn up with a view to simplifying and expediting the purchase and clerical routine for these standard items, most of which are carried on open contracts with vendors for a six or twelve months period. It is a large form, 16 x 22 inches. One copy is retained at the plant for record purposes. The original, sent to New York, is perforated vertically, one part being used as the purchase requisition while the other goes to the accounting division, where the inventory records are kept for each plant.

In the purchasing department, this form goes directly to the fanfold operator after a quick check as to the general nature and the quantity of supplies involved. A master sheet of the same design shows the name of the contract vendor and unit price on each item, and the individual orders can thus be typed and issued with a minimum of supervision or attention on the part of the buyers. A blue pencil check is entered opposite each item to indicate that it has been ordered. On material such as coal, the requisition is turned over to the buyer, who notes the vendor, mine, and contract price appropriate to that plant, and with this information the fanfold operator is able to write the proper order.

For general supplies not listed on the monthly form, and for special requirements, a more conventional type of requisition is employed. It is sent to the New York office after approval by the Plant Superintendent and the Division Superintendent, and requires the ap-

proval of the Production Superintendent before the purchasing department acts on it. A form similar to this, but imprinted with the word "RUSH" and further identified by being printed on bright cherry colored paper, is used for emergency requirements such as machine parts. It follows the same channels for authorization and approval, but secures preferred attention.

The majority of requisitions for new equipment originate in the New York office. The production department, which has general supervision over the operating program, confers with engineering and purchasing as to the particular type of equipment needed, and engineering issues the requisition to purchasing, with the approval of the executive committee.

Garages are maintained in each of the cities where the Association operates its own distribution system. Requisitions for automotive supplies and garage equipment generally originate with the garage superintendent. They require the approval of the Division Manager, the Sales Manager at New York, and the traffic department.

The somewhat elaborate system of approvals noted in the above procedure is prompted by the cooperative nature of the organization, in which members take a very personal interest in all expenditures and records are constantly open for inspection. The appropriation for equipment and maintenance is carefully budgeted at the beginning of the year, and must be closely adhered to. In this respect the conduct of the Association business is not dissimilar to the management of governmental purchasing, and a system which offers every safeguard against the suspicion of waste or carelessness is considered a wise precaution.

Quotations

Two principles that are observed in this purchasing department are (1) that all orders shall be pre-priced before issuing, and (2) that these prices shall be arrived at by competitive bidding.

On staple items this is taken care of by contracts, as mentioned above. There are about 150 such contracts in force. The duration of the contract, and the periods at which such agreements are made, are dictated by the judgement of the purchasing agent, taking economic and seasonal factors into consideration. It has been considered a prudent policy to have the legal department pass on each contract before it is acknowledged, and from an administrative standpoint the approval of the executive committee is also secured.

On other items, except those so small in volume and value that the effort and expense would be out of proportion, a request for quotation is sent out. This is made on a seven-part fanfold form, which provides an original copy for office use, and three sets in duplicate to be sent to three prospective suppliers. The vendors' names are filled in separately after the body of the form has been typed, and the office copy lists all those to whom the request is issued. If more than three bids are desired, another copy is made, which enables the purchasing department to reach up to six suppliers.

In using this form, the bidder fills in his quotations directly on the sheet, which gives him a carbon copy for his own files, and sends one copy back to the buyer. The advantages of having the quotations received in this uniform manner is obvious, particularly when several items are involved, or when specific requirements have been detailed on the request. Instead of having to pick the information out of the body of a letter, quite likely in some sequence other than that used in the original request, and avoiding the danger that some modification of the specifications or terms might be overlooked in the context of the letter, the quotations are strictly comparable and easy to read in parallel columns, thus giving at a glance the essential price information necessary in making the decision as to where an order is to be placed.

When that decision is reached,

the office copy is stamped with a rubber stamp, which has a line for entering the name of the approved vendor and spaces for checking the reason for that choice, whether on the basis of price, quality, or some other factor. With that information appearing on the face of the quotation sheet, the complete list of bidders noted in the heading, and the actual bids attached, there is a complete story of the transaction immediately available for reference in the event that any question is later raised concerning why the business was placed with any particular supplier. The necessity of going on record in this way also keeps the buyers alert and value-conscious.

A file of these quotation records, arranged by commodities, serves the purpose of the price record maintained in many other purchasing departments and eliminates a vast amount of clerical detail which would be entailed in posting each price.

Another useful and interesting record that has saved a lot of argument and misunderstanding is a form developed for recording the more or less informal quotations received by telephone or during an interview, on which there is no correspondence or written bid, but which are frequently the only basis for pricing and issuing an order. To make these quotations a matter of record, the complete data as to price and discount, date and manner of quoting, name of the vendor and his representative who gave the information, and any other pertinent remarks, are entered on a pink mimeographed sheet for the purchasing department files. This sheet is signed by the person receiving the quotation, and also by the bidder whenever it is a personal interview. This record has proved an invaluable reference, of far more authority than the usual memorandum or the order issued without such supporting data.

Rating Vendors

As an adjunct to the quotation file, and indicating the recognition that price alone is not the measure

of value or of vendor acceptability, the purchasing department is now in process of building up a system of rating or classifying the various vendors, and the information thus compiled is of further value in helping the buyer to a suitable selection of the source of supply, as well as supplementing the data appearing in the rubber stamped form mentioned above.

A simple form has been prepared, which is affixed to the inside of the commodity folder. It lists the commodity by name or symbol, and gives the specifications which apply. Below this is space for entering the names and addresses of nine sources of supply, and in a series of columns opposite each name the pertinent information regarding each vendor can be entered.

In the first column, the vendor is rated as "approved" or "optional"; if this space is left blank, it indicates that the vendor has not been tested by the Association in an actual transaction. In the next column is indicated whether the vendor is a manufacturer, a manufacturer's agent, or a jobber.

The next three columns are devoted to his financial stability, his manufacturing facilities, and service facilities. This is followed by a space for recording an "experience rating," denoting whether he has been found to be satisfactory in previous business dealings. In purchasing, as in every other undertaking, the cold clear facts of personal experience outweigh theoretical or statistical considerations as a guide to future conduct. At the right is a space headed "Other Considerations" for miscellaneous notations which may have a bearing on the vendor's qualifications or any special factors to be considered in connection with the company.

Specifications and Tests

On the matter of specifications, about three hundred have been definitely set up as standards in buying. They are of course subject to revision at any time, and the list is gradually being extended. Meanwhile, the determination of quality and the maintenance of



H. T. COATES

quality standards is watched very closely by means of detailed service records and extensive use of the laboratory facilities mentioned earlier in this article.

A good example of the service record is that covering automobile tires, which gives the purchasing agent an accurate cost per mile, by make of tire and by type of service. There is naturally a wide difference in the requirements for heavy trucking over country roads, for long distance haulage over state highways, for city deliveries over paved streets but with more frequent stopping and starting, for passenger cars, summer vs. winter driving, etc. The liability of failure through cuts and punctures can be measured with considerable accuracy, and figures in the cost of maintenance, the feasibility of re-treading, and other considerations which enable the buyer, on the basis of actual experience, to buy mileage instead of rubber.

Another means of checking up on design in order to perfect the specifications for the important item of milk cans is the report on defects or failures in this type of equipment, required from each plant. This report is in questionnaire



H. K. LA ROWE

form so that no essential bit of information shall be overlooked or omitted. It asks for the name of the manufacturer and the date of manufacture (embossed on each can); whether brought in by a hauler or by the milk producer himself; the date of failure and the number of days in service; the kind of failure—whether weak or unsanitary soldering, poor tinning, split breast or neck, or leakage. An outline sketch of the can appears on the report so that the location of a leak can be readily indicated. This is not only valuable as a basis for adjustment in the case of defective cans, but with such information accumulated over a long period, the accepted design can be progressively improved and perfected, and the most serviceable type of construction can be determined.

Mention has previously been made of the Association's laboratory at Syracuse. This is not maintained primarily for purchasing department use. It is principally devoted to problems of quality control of the product, coming under this branch of the operating department. It is concerned with bacteriological problems, quality of milk, and similar problems. Never-

theless, it is liberally used by the purchasing staff for the testing of new materials and methods that promise some advantage or economy in the operations of the Association.

In sending samples for test or analysis, a gummed label, 4 x 6 inches, is attached, on which the sample is briefly described together with the use for which it is intended. A formal report is returned to the purchasing department at the conclusion of the test, duly signed by the laboratory man, and to insure that the testing has not been a useless formality, the report is not complete until the purchasing department has entered upon it the conclusions to be drawn from the analysis, correlated with cost data concerning the material. A space for this information is provided at the bottom of the report form.

A sample room at the New York office contains specimens of various articles which have been accepted as standard. This is not only convenient for purposes of reference, but if the operating department should express a desire for a new type of rubber hose, for example, the present standard is instantly available and changes can be intelligently discussed on the basis of whatever different or additional qualities may be desired. Specimens of hose, and milk cans, and other supplies are carried here cut sectionally so as to show details of construction which might otherwise not be apparent.

Another very important factor in this connection is the Subject File. This is a permanent record on all commodities, arranged according to the decimal system of classifications followed by the National Bureau of Standards. In this file is a very complete compilation of technical data concerning the various materials, including specifications, the reports of all tests, special reports and investigations, and technical publications from government agencies, scientific societies and other sources. It is an invaluable storehouse of the best information to be had regarding the properties, performance, and application of materials, and is ex-

cellent insurance against the duplication of research and against the possibility of losing the benefits of some test or study which might not have been of immediate use at the time it was made, but which may become decidedly pertinent at a later date.

Purchase Orders

The purchase order is a fanfold form, providing copies for the auditing and engineering departments and plant files in addition to the purchasing department copy. It has been designed in strictly columnar form, so that all entries on the machine are simplified by the use of a single marginal stop, whether filling in the date and terms in the heading or typing the body of the order. There are two parallel columns for entering the price, so that on occasion this information can be omitted from the plant copy, which is slightly narrower than the others.

The reverse side of the plant copy is printed to serve as a receiving record and report. All adjustments and returns are handled by the purchasing department, but such adjustments must be based on complete information. The receiving record therefore covers shortages; overshipments or duplicate shipments, with recommendations as to whether the overage should be retained or returned; wrong or defective material, with notations as to whether it can be used to advantage and whether the defects caused a loss of time or other expense; also any transportation charges that are involved.

Unfilled orders are filed in binders, pending the receipt of invoices and receiving reports to show that the order has been completed. These are arranged alphabetically by vendors, and numerically under each vendor's name.

Invoice checking is a responsibility of the purchasing department, and any discrepancies are immediately referred to the buyer who issued the order to be reconciled or adjusted. Thanks to the policy of pre-pricing all orders, there is very close control of this feature.

As a matter of interest, a record has been kept of the responsibility for errors on this score, and in the majority of cases it has been found to be the fault of the vendor, which is perhaps unimportant except as an indication of the importance of accurate checking. The file clerk periodically removes the orders from the binder, a slot punch making this an easy operation without disturbing the rest of the file. The order and invoice are then turned over to the receiving report clerk to be matched up with the notices of receipt of materials.

The complete set of order, invoice, and receiving report constitutes the authorization for payment by the accounting department. More than 75% of the invoices are discounted. But in order to avoid losing the discount because of a tardy receiving report and the consequent unavoidable delay, a

simple system has been devised. The invoice is stamped "Goods in Transit" and sent along without waiting for the receiving report. It is paid, and the voucher number marked on the invoice, which then goes back to the receiving report clerk to be matched up for the permanent file as soon as the report comes in.

A visible card record of purchases is kept by commodity items, listing the bare record of the Order No., Invoice Date, Description, Amount, Account No., and the dates when the invoice was approved and the goods received.

Local Purchases

As in every organization, however completely centralized, there are some occasions when it is best to delegate the buying authority to someone at the plant itself. Such are the small emergency items,

local services like automotive parts and repairs. Furthermore, since the Association operates as a distributor in several localities where its own plants are located, there is an important factor of good will and policy that cannot well be ignored. This is quite aside from the problem of reciprocity.

To facilitate such procedure, while retaining the greatest possible measure of control against its abuse either by the plant or by the supplier, the purchasing department each year arranges standing orders with certain local vendors in each locality, who may be in a position to supply the materials coming under this classification. To each of these houses, the following letter is sent, signed by the Assistant Purchasing Agent:

Gentlemen:

We have notified our Plant Manager at that your firm has been selected to furnish such small and emergent items as may be required at that plant.

The price bases, trade discount and cash discount terms which you offer to us should always be the best that can be obtained and should, of course, be competitive.

Your cooperation in rendering monthly invoices directly to the Plant will be greatly appreciated.

At the same time an instruction sheet is issued to each local plant, listing the names and addresses of these vendors, the materials handled, the price base, trade discount and cash discount. This sheet is signed by the Purchasing Agent and approved by the Superintendent of Plants.

On such accounts, invoices are issued monthly by the vendor, and sent directly to the plant in triplicate. Two copies are forwarded to the New York office, where they are checked in the usual way against prevailing prices which would have been secured by the purchasing department. If there is any marked discrepancy, or if the volume of such purchases mounts to unreasonable proportions under the guise of emergency requirements, the matter is promptly called to the attention of the plant manager

P-2753-V 8-36 1.—White—Purchasing Dept. 2.—Goldsmith—Purchasing Dept. 3.—Blue—Field Clerk 4.—Pink—Follow-up 5.—Green—Mat. Inspection Copy		Test and Analysis Report for Purchasing Department		SUBJECT FILE No. TEST No. REPORT No.
Report wanted by <u>H. T. COATES, Purchasing Agent</u>		Report wanted by <u>H. K. LaROWE, Asst. Purchasing Agent</u>		
Manufacturers' Names and Addresses				
Article tested				
Tested at		Date sent		
Type of report wanted				
This report wanted				
DATE TEST STARTED				
DATE OF THIS REPORT				

P-1582-V

TEST AND ANALYSIS NO.

Attach this Label to Bag, Bottle, Carton, Container or other medium used to contain sample for analysis. (Do not place this label on outside of shipping box or carton.)

DESCRIPTION OF SAMPLE:

Suggested use of Material to be Analyzed:

NAME OF COMPANY:

AND ADDRESS:

D. L. ORDER NO.:

Send this sample to Syracuse General Laboratories
810 Burnet Avenue, Syracuse, N. Y.

By: P. P. Ins. ☐ Exp. Prepaid ☐ FRT. Prepaid ☐

SAMPLE SENT BY:

UNDER DATE OF:

This form issued by Purchasing Department.

—SPACE BELOW FOR USE OF PURCHASING DEPT.—				Signature
Conclusion				
Unit	Price	F. O. B.	File Ref.	

Figure 2. Label and report for laboratory test

Figure 3. Forms like these save letter writing

through the official in charge of the district, who, being vitally interested in keeping operating expense within bounds, can be counted on to correct the condition and put a stop to further abuse.

Reciprocal purchasing is not a major problem in this organization, but it does sometimes arise. If the sales manager in a given territory wishes to place certain business with a particular seller, he secures a definite bid at the same time that the purchasing department gets quotations in the usual course, either from existing contracts or by special inquiry. The two are then compared and there is an accurate measure of the extra cost, if any, of placing such business with the desired supplier. The difference may be very small, or it may run up to a considerable figure. The sales manager is then asked to decide whether that extra cost is likely to prove worth while. The decisions are fairly made upon the merits of the case, sometimes accepting the penalty in cost and sometimes deferring to purchasing department efficiency. But in any case, it is a matter of record why the arrangement has been made and where the extra expenditure for materials should be allocated. The purchasing department itself is comparatively free from pressure on this score.

Correspondence Short-Cuts

The carrying out of purchase procedure after the order has been placed generally involves a considerable amount of rather routine

correspondence. It may concern follow-up for delivery, adjustments, lack of necessary information, errors or discrepancies in invoicing, or a variety of other details, all of which may be generalized under a number of frequently recurring circumstances. Some time ago, an analysis of the time spent at various duties by individual members of the department, revealed that an excessive amount of effort was being directed to the handling of such matters through ordinary correspondence.

As a result of that experience a number of forms have been devised which cover the situation adequately by a series of check marks or brief entries of date or price, and which invite a prompt and specific reply on the form itself. Some of these forms are illustrated herewith. They command attention and action by the statement at the head of the form: "This Is An Important Request For Information," and a footnote further explains: "We are trying to conserve your time as well as ours by using this form. It is sent in duplicate to enable you to use one copy for a reply and keep the other for your files." On follow-up forms this is amplified by the statement: "In selecting our sources of supply we give consideration to the response given to the following requests: (1) That you will endeavor to keep your delivery promise. (2) That you will notify us of any unavoidable delay as as soon as you encounter it. (3) That you invoice promptly." The

response to this method of correspondence has been eminently satisfactory.

Routine correspondence between the various plants and departments is also simplified to a large extent by the use of similar forms covering recurring situations, except that in this case a less expensive mimeographed slip is used.

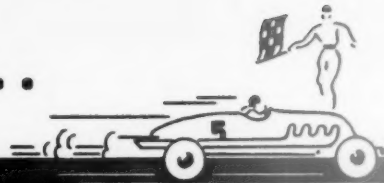
Reports

In addition to the usual records covering actual transactions, this purchasing department makes regular reports to management giving a general picture of departmental operation and the current status of buying for the Association. Each month these reports show (1) an analysis of purchases, under forty-two commodity group headings, with the purchase cost of each, a comparison with the previous period, and the percentage which each group bears to the total purchases; (2) an analysis of office costs; and (3) a record of cash discounts earned. These reports provide a constant check against budgeted appropriations and an indication of operating efficiency. Neither one nor the other can get very far out of line without having the situation promptly brought to the attention of the purchasing agent and of management.

There is also a weekly summary report of value in determining purchase policies. It lists the number of orders placed for the week, and a running total for the month to date and for the fiscal year to date; the same information regarding the amount of invoices received; and three entries on price trends relating to (a) the general commodity market, (b) the current trend on commodities regularly purchased by the Association, and (c) the long trend on these items.

This frequent summary of activities and conditions results in an unusually complete picture at all times, so that the department itself and the general management is thoroughly informed of what is going on, both for the moment and in relation to the annual or long term program.

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Internal Grinding Wheels

● Here are small but important wheels which must be perfect as to size, grain and grade. Their work is done on small areas, their object: slight removal of material and an extremely high smooth finish.

Today our most modern method of making

these small wheels produces in thousands, internal wheels which have an extremely high production record and an action which leaves a finish as smooth as the finest mirror, accomplished by the correct proportions of grain and bond coupled with a specialized process of vitrification.

STERLING



ABRASIVES

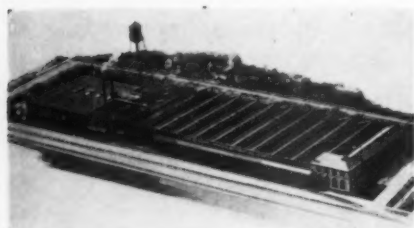
THE STERLING GRINDING WHEEL CO., TIFFIN, O.

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AN OPERATION**



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PERSONALITIES in the NEWS

E. STANLEY BOSANKO has been appointed purchasing agent for Nassau County, New York, succeeding DAVID DOWS, resigned. Mr. Bosanko has been assistant purchasing agent ever since the department was set up, two years ago, and was in complete charge during a considerable period of the past year when Mr. Dows was disabled in an automobile accident.

L. D. PENNY has been named Assistant State Purchasing Agent for the State of Georgia, assigned to the University of Georgia, at Athens. He succeeds TONY CAMARATA, resigned.

COMFORT E. BROWN has been appointed general purchasing agent, and J. R. LEWIS as assistant purchasing agent for J. H. Weaver & Co., Philadelphia.

J. W. STOKEY, for the past ten years assistant purchasing agent for the City of Dallas, has resigned, effective July 30, to take charge of the insurance and loan division of the Hugh January-Eastus Realty Company of that city.

JULIAN G. DAVIES, Purchasing Agent of N. Slater Co., Ltd., Hamilton, Ont., addressed a recent meeting of the Lions Club in that city on the topic, "Buying and Selling."

J. L. BURGESS has been appointed director of purchases for the Brunswick - Balke - Collendar Company, Chicago, effective August 1st. For the past ten years Mr. Burgess has been directing the activities of the Educational Buyers, Inc., of Chicago.

ALLAN E. DICK, formerly purchasing agent of the Amoskeag Manufacturing Co., Boston, has joined the organization of Wetherell Brothers Co., steel merchants, Cambridge, Mass.

GEORGE DOBSON has been appointed purchasing agent for the Hotel Lexington, New York City.

CLARENCE G. FOX, formerly purchasing agent for the Goodyear Zeppelin works at Akron, and for the past year and a half associated with the purchasing division of the Diesel Division of General Motors Corp., has been named purchasing agent for the Marvel-Schebler Carburetor Division of Borg-Warner Corp., at Flint, Michigan.

T. O. MARKS of Sanford, N. C., has been named purchasing agent for Lee County. He will carry on the work in addition to his duties as county tax collector.

HOWARD F. STOVER, Purchasing Agent for Gaso Pump & Burner Co., Tulsa, has been appointed to the advisory board of the Tulsa Community Fund, in charge of branch house contributions. This is the fourth successive year in which Mr. Stover has headed this important division of the Community Fund drive.

JAMES PLUMMER, Purchasing Agent of the Newport News Shipbuilding & Dry Dock Co., and H. KENNETH PEEBLES, Assistant Purchasing Agent, will transfer their office from New York City to Newport News, Va., effective September 1st, in connection with a general rearrangement of the company office organization.

GEORGE BROWN, who has been coal purchasing agent for the H. C. Frick Coke Co., Pittsburgh, since 1921, has been appointed general purchasing agent of the company and its affiliates, succeeding THOMAS S. DUNCAN, retired. Mr. Brown will continue to supervise coal purchases for the company. MATTHEW S. MAWHINNEY has been appointed assistant purchasing agent.

A NEW TREND in - - - COMMODITY PRICES !

THIS IS a period when "almost anything can happen" in commodity prices.

WAR THREATS, LABOR TROUBLES and a host of other influences becloud the present picture and make the future uncertain.

ALL OF THESE DEVELOPMENTS have a profound effect upon the price movements of basic commodities. Price stability vanishes.

EACH COMMODITY MUST STAND or fall so far as price is concerned upon the favorable or unfavorable factors that exist.

ONLY THROUGH CONSTANT study and appraisal can the outlook for prices be forecast with any degree of accuracy.

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THE MARKET PLACE



*A quick review of the market
noting major developments in
supply, demand and prices of
selected basic commodities*

Supply

BURLAP

REPORTS ON JUTE ACREAGE in India are down 2.4% from a year ago, below the earlier estimates. Domestic stocks are ample—spot supplies of 179 million yards at the end of June representing better than 2½ months supply, and another 170 million yards afloat.

COAL

BITUMINOUS OUTPUT HELD a little better than 7 million tons per week during July, maintaining approximately the same rate as in the previous month. Production for the year to date is about 11% ahead of the corresponding figure for 1936. Beehive coke production, which slumped sharply in June, recovered about half of that loss.

COPPER

FOR THE SECOND SUCCESSIVE month, copper stocks showed a moderate increase, amounting to 10,317 tons in world stocks, bringing the total to 301,765; and 2,435 tons in domestic stocks, for a total of 111,020. Blister stocks were up 7,968 tons. To date there has been no production curtailment, possibly due to considerations of armament requirements. U. S. production in the southwest habitually drops off slightly in summer months.

COTTON

REVISED ESTIMATES OF COTTON acreage from various sources show only minor changes, indicating an increase of 9½ to 10½% over the previous year. Crop conditions are not quite as favorable as reported earlier. The present stand is rated as fair to good, with insect infestation high and fewer blooms than usual. In summary, the new crop now appears to be somewhat larger, but the increase is more conservatively estimated than it was a month ago.

Demand

TRADING WAS FEATURELESS except for a buying spurt in the second week of July. U. S. consumption for June amounted to 65 million yards, up one million from May.



SLACK CONTINUED IN POOR DEMAND, but other grades showed some improvement, the interest of industrial consumers in smokeless and steam coals being substantially greater than a month ago and steadying the market as a result.

STATISTICS FOR THE FIRST half year show domestic sales of 277,000 tons, down 55% from the second half of 1936. Shipments in the same period, however, amounted to 510,000 tons, much of which was of course against the heavy buying of the previous half year. July sales were 62,298 tons, the best month since February.



JUNE CONSUMPTION OF COTTON was 681,394 bales, slightly less than in May, but high for this month. Textile buying continued to improve. The backlog of gray goods orders increased, and bookings on print cloths were the best in over two months. Toward the middle of the month, buying interest extended to the finer goods as well. Wholesale and retail sales are in good volume.

Market

THE PRICE DECLINE OF May and June was checked last month. Spot quotations (10½ oz. 40 in.) opened at 5.35 and sagged to 5.30 in the first few days but quickly regained that loss and held steady and firm over the balance of the month. At the end of July, spot prices were unchanged, futures slightly down.

THE PRICE SCHEDULE GENERALLY firmed during July, and several advances were noted ranging from 5 to 15 cents per ton at the mine on the prepared sizes of smokeless coal. Middle western mines also raised their list. A further advance of 10 to 15 cents on smokeless was scheduled for August.

THE DOMESTIC PRICE FOR copper was unchanged and firm at 14 cents, sales being largely for three months delivery. There is little in the present situation to suggest any change in the schedule. Foreign copper regained its earlier strength and was around 14.40 to 14.45 at the end of July.

COTTON PRICES RALLIED in the first 10 days of July, but then broke sharply and by the end of the month were at new low levels for the year, with textile items following suit. Middlings were off 171 points from the month's high, to 10.89. Yarns were off 1½ cents to 28. Print cloths off ¾ to 6½ cents. Sheetings off ¾ to 7 cents. The usual tactics of trade support were unavailing as stop loss selling and dumping of long cotton, both trade and speculative, followed the crop reports.



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Supply

IRON and STEEL

STEEL OUTPUT ROSE SLIGHTLY during July from the low record of the strike month, and was up to 85.5% by August 1st. A part of this expansion was at the expense of backlogs accumulated over previous weeks, and the spread in delivery time is now being shortened. Steel making capacity has been increased by nearly 300,000 tons since the first of the year, according to the American Iron & Steel Institute, which gives a new tonnage significance to percentage statistics.

Demand

BUYING INTEREST CONTINUES HIGH and well diversified, though retail purchases of steel are somewhat slower. Export trade has been heavy. The automotive industry and railroad purchases may be expected to develop greater volume of demand over the next two months.

Market

THE STEEL PRICE LIST was unchanged during July, and fourth quarter prices have been reaffirmed at the same general level. Costs are rising, with increases in coke, ferro-alloys, and scrap, as well as the upward wage trend. The price feature of the month was in the scrap market. Heavy melting steel scrap climbed from a recent low of \$18 to a range of \$21-21.50 at Pittsburgh as supplies were scarce and mill demand heavy.



LUMBER

LUMBER OUTPUT WAS SHARPLY OFF in July. In the opening weeks, production was down to 69% of the 1929 weekly average, the poorest showing since March. In the third week, production went up to 83%, and the month ended around 80%. Shipments were at 60% in the first half of the month, and 74% in the second half.

NEW ORDERS FOR LUMBER went to a low point for the year, recovering somewhat in the closing weeks but still running more than 20% below production.

LUMBER PRICES CONTINUED TO SAG during July. Quotations on Southern pine dropped sharply in the second week but subsequently recovered about half of the loss. The net decline for the month was 72 cents per M ft., carrying the price down to a position 15% below the April peak. Hardwoods also eased off about 2%.

NAVAL STORES

RECEIPTS OF ROSIN AT Southern ports are slightly behind the record of last season, despite favorable weather conditions and a relatively attractive market. There is no true measure as yet of the effect of the campaign to keep trees out of production. Stocks in hands of consumers are reported large.

DEMAND IS SEASONALLY SLOW, most buyers being quite willing to await further developments in regard to the new crop before coming into the market.



TURPENTINE PRICES SHOWED considerable resistance to the declining trend, and held up to 39³/₄ cents for the first half of the month—a better showing than in June. In the second half, however, prices went into new low ground. There were minor fluctuations in the rosin list, which was generally steady and rose slightly in the closing week.

PAPER

FOR THE THIRD SUCCESSIVE MONTH, paper production fell off slightly in July, but was still within about 4% of the high average of the first five months.

MARKET DEMAND IS IN MODERATE volume, and is considered normal for the season. Boxboard is beginning to show greater activity.

THE PAPER PRICE LIST IS FIRM and unchanged. Waste paper quotations are lower, European pulp quotations slightly higher than a month ago.

Supply

PETROLEUM

PRODUCTION OF CRUDE OIL was down slightly from June levels during the first half of July, but went up sharply at mid-month. In the final week a new all-time record was attained, with a daily average of 3,576,400 barrels. Domestic stocks of crude oil advanced to well over 300 million barrels. Stocks of gas and fuel oil also climbed. Gasoline storage dropped substantially, as is expected at this season.

RUBBER

SHIPMENTS OF CRUDE rubber from the Far East, which were below quotas and below expectations for the first five months of the year, speeded up in June and the accelerated pace was continued throughout July. Two contributing factors to this development were the effort to fill permissible quotas before the right to make up earlier deficiencies should expire, and the desire to get stocks afloat before the new and higher freight rates from Singapore became effective on August 1st. To the extent that these two factors influenced the increase in tonnage, it would be expected that second half year shipments would show a decline from recent rates. The export quota, commencing in July, is set at 90%, and it seems unlikely at this time that this will be completely filled. Factory stocks are ample. Tire stocks in the hands of manufacturers, which had steadily increased since a year ago, were slightly down in May and June, though standing about 4½ million units ahead of 1936.

ZINC

THE TIGHT SUPPLY OF SPOT zinc was but slightly relieved in recent weeks. As predicted earlier, surplus stocks, which had contracted for 18 successive months through May, did show a slight reversal of this trend, but it amounted to only 307 tons, while the common grade of prime Western actually declined 237 tons to 10,256, an all-time low. There is now less than two weeks' supply available, and consumers are believed to hold about one week's supply. Meanwhile production was further curtailed, in both ore and refining, until the buying wave of the third week stimulated some greater activity. Stocks of ore were down to less than 18,000 tons at the end of the month, but 58 mills are now in production, representing a considerable expansion.

Demand

A HEAVY RATE OF GASOLINE consumption featured the demand for petroleum products in July. Road oil was also in good demand. Interest in fuel oil, which had been maintained beyond normal expectations thus far during the year, tapered off appreciably in the closing weeks.



DOMESTIC CONSUMPTION, and world consumption, of rubber continues at a high rate, though not quite up to the tonnage of the early months. Revised figures for June showed slightly more than 55,000 tons used in this country, bringing the half year total to 312,097 tons, or 10% ahead of 1936. This is of course an all-time high record. Trade estimates are around 45,000 tons for July and 41,000 tons for August, with a strong possibility of reaching 600,000 tons for the year. Reclaimed rubber use is also sharply up. Last year this activity was at 22.4% of crude rubber consumption, and the ratio has now risen to 28.6% of the heavier 1937 tonnage. Markets were generally quiet, outlook for consumption favorable.



ZINC BUYING WAS OF A desultory nature, as for several months past, until the publication of June statistics, which initiated a major buying movement as galvanizers and brass makers placed orders on a broader covering scale. At the same time, the resumption of steel operations after widespread inactivity due to strike conditions, and the \$5 per ton advance in prices, stimulated the movement, which amounted to approximately 28,000 tons of sales in a two week period. In the closing week sales were again at a nominal rate, but unfilled orders at the end of the month were up 21,722 tons to 75,990.

Market

PETROLEUM PRICES WERE distinctly firmer in July. Crude quotations, nominally unchanged, are reported as ready for a general upward revision. The tank car price of gasoline was advanced 1/8 to 1/4 cent, and retail markets were strong, with increases noted in several eastern metropolitan areas, while retail price wars were restricted to a few localities.

DESPITE A CLOSELY BALANCED statistical situation, continued good demand, and the threat of unfilled export quotas, all of which should normally strengthen the market, rubber prices failed to show any consistent firmness. In dull trading, quotations wandered rather aimlessly, but always tending downward. Opening the month at 19½, the market sagged fractionally to 19 at the middle of the month, and lost another 1/2 cent in the latter half. The swings were not as wide as in June, possibly due to the fact that the higher export figures had already been discounted in quotations, but the net loss was even more severe. Prices are now close to the level at which greater factory buying interest may be expected to support the schedule.

ZINC PRICES OPENED JULY firm and unchanged at 6¾ cents (East St. Louis). On the 10th, after heavy contract buying had been felt in the market, one leading producer advanced quotations 1/4 cent per pound, and within three days the new level was firmly established throughout the industry. The bulk of the volume buying was done at the higher figure, which was maintained over the balance of the month. Brass special is quoted at a 10 point premium, and high grade zinc a full cent above prime Western. Ore prices followed the advance after a week's lag, going up 50c per ton to a range of \$44.50 to \$45.50.

Developments in Plastics

A MANUFACTURER OF MOLDING plastics estimates that one order out of every four requires the use of special compounds embodying properties not found in the standard compounds. Among the conditions that have to be met are: exposure to heat, acids, alkalis, water, oils, solvents, steam or perspiration; frictional wear, pressure, impact; electrical contact and dielectric problems; intricate construction, placement of inserts, machining and other finishing operations, and mechanical peculiarities. Oftentimes a proposed application involves several of these or similar problems.

There can be little doubt that the challenge of these requirements has contributed materially to progress in the development of plastics. Manufacturers have accepted every problem that has promised a wider outlet for phenolic molding, and the steadily growing list of products using these materials is a real tribute to the progressiveness of the industry and the resourcefulness of its technicians.

Among the more recent announcements presents a new line of molding compounds specially developed for superior impact strength. It provides a range of four general classifications requiring from 0.22 to 2.0 ft. lbs. energy to break, on A.S.T.M. standard test specimen, corresponding to 2.75 to 25 ft. lbs. per inch square. There are two or more molding materials in each classification, coupling this impact resistance with chemical and dielectric properties in various combinations, so that the possibilities of use embrace such diversified products as telephone handsets, golf club heads, cleats for football shoes, instrument cases, junction boxes, oil well equipment, rayon spinning buckets, and other parts having in common the requirement of relatively high resistance to impact or shock. Materials are now available that have up to five times the impact strength of ordinary phenolic compounds, at only moderately higher cost, and

with acceptable surface and finish characteristics. And research is not yet done with this phase of the problem.

A requirement that recently came from the manufacturers of synthetic yarns called for a number of special properties. It had to be molded into intricate shapes, and present an absolutely smooth surface to avoid damage to the delicate fibers. This meant that it must withstand machining and sanding operations after molding, without exposing filler spots or other roughness after the original film of resin was worn from the surface by nor-

mal friction. It had to resist the action of chemicals used in the yarn manufacturing process, and water absorption must be at a minimum to avoid dimensional changes that would interfere with the delicate tolerances of this industry.

Another type of problem is that encountered in products subject to extreme variations of temperatures. Even more exacting from the manufacturing point of view is the molding around metal parts or inserts, where the coefficients of expansion must be so adjusted to each other that cracks and internal strains will be avoided.

The advertisement features a large, detailed illustration of a Brown & Sharpe No. 12 mill in operation. The machine is a complex industrial device with various components like the table, headstock, and cutting tool visible. Above the machine, there are three diagrams illustrating different milling techniques: 'CLIMB MILLING', 'CONVENTIONAL MILLING', and 'OR COMBINATION OF THE TWO'. Each diagram shows a gear-like cutting tool and a workpiece, with arrows indicating the direction of rotation and feed. The text 'Work' is written below each diagram. At the bottom of the advertisement, there is a large, bold heading 'BROWN & SHARPE'.

CLIMB MILLING

CONVENTIONAL MILLING

OR COMBINATION OF THE TWO

ALL ON THE No. 12

There are several ways to mill any job with No. 12 you can select the best. Investigate the advantages of this Electrically Controlled Plain Milling Machine. Brown & Sharpe Mfg. Co. Providence, R. I., U. S. A.

BROWN & SHARPE

AMONG THE ASSOCIATIONS

CANADIAN CONVENTION

Toronto—The 1937 convention of **Canadian Associations of Purchasing Agents**, and Industrial Products Exhibition, will be held at Toronto on Friday and Saturday, September 24 and 25. Tracy E. Lloyd of the Hinde & Dauch Paper Co. of Canada, Ltd., president elect of the Toronto Association, is general chairman of the convention committee, assisted by the following staff:

Program, R. M. Sedgewick of Standard Chemical Co., Ltd.; *Products Exhibition*, A. I. Hill of Swift Canadian Co., Ltd.; *Registration*, L. Tolson of McLean Publishing Co., Ltd.; *Hotel Reservations*, J. Stewart of Canadian Ice Machine Co., Ltd.; *Hotel Arrangements*, F. G. Heard of Borden Co., Ltd.; *Entertainment*, E. E. Ritcey of Dominion Wheel & Foundries, Ltd.; *Reception*, W. H. Smith of Venus Pencil Co., Ltd.; *Publicity*, J. R. Bell of Business Systems, Ltd.; *Ladies*, A. J. Cherry of Canadian General Electric Co., Ltd.; *Golf*, E. S. Long of A. E. Long & Co., Ltd.; *Transportation*, J. E. Joyce of British American Oil Co., Ltd.; *Treasurer*, N. H. Taylor of Dominion Bridge Co., Ltd.; *Purchasing*, C. G. Sherwin of Grinnell Co. of Canada, Ltd.

The convention headquarters, meeting rooms and exhibit will be at the Royal York Hotel.

NEW OFFICERS

Akron—Officers for 1936-1937 have been chosen by the **Akron Association**, as follows: *President*, S. S. Rothrock of the B. F. Goodrich Tire & Rubber Co.; *Vice Presidents*, E. E. Cay of Ohio Boxboard Co., and F. J. Karg of Herman Machine & Tool Co.; *Secretary-Treasurer*, S. L. Musson of the M. F. Murdock Co.; *National Director*, A. E. Pyle of the Akron Lamp & Mfg. Co.; *Directors*, L. A. Murphy of Goodyear Tire & Rubber Co., S. A. Bowers of Akron Pure Milk Co., R. M. Graham of General Tire & Rubber Co., and K. H. Suder of Akron, Canton & Youngstown Railroad Co.

Los Angeles—Officers of the **Los Angeles Association** for 1937-1938 have been elected as follows: *President*, Mel C. Barker of Featherstone's, Inc.; *Vice Presidents*, Robert L. Grube of Stephens-Adamson Mfg. Co., and J. A. Tongue of Western Dairy Products, Inc.; *Secretary*, Dean L. Fisk of University of Southern California; *National Director*, Percy J. Keith of W. P. Fuller & Co.; *Directors*, A. J. Smith of Fibreboard Products, Inc., and J. D. Perkins of California Hardware Co.

Milwaukee—Officers of the **Milwaukee Association** for 1937-1938 are the following: *President*, H. A. Steffen of Wadhams Oil Co.; *Vice President*, F. S.

Wilhoit of Cutler-Hammer, Inc.; *Secretary*, T. H. Schultheis of John Rauschenberger Co.; *Treasurer*, E. H. Jones of E. R. Wagner Mfg. Co., *National Director*, J. F. Bode of Briggs & Stratton Corp.; *Local Directors*, A. O. Hintz of General Malleable Corp., Waukesha, and E. Janke of Jos. T. Ryerson & Sons.

Springfield, Ohio—New officers of the **Springfield Association** are: *President*, A. L. Stoll of Delscamp Paint & Glass Co.; *Vice President*, J. H. Horner of Antioch College; *Secretary*, E. W. Saum of Roth Office Equipment Co.; *Treasurer*, John Henry of Lagonda-Citizens National Bank; *National Director*, C. M. Shockey of Howard Paper Co.; *Local Director*, T. A. Welsh of Springfield Hardware Co.

Toronto—The **Toronto Association** has elected the following officers for 1937-1938: *President*, Tracy E. Lloyd of Hinde & Dauch Paper Co. of Canada, Ltd.; *Vice Presidents*, E. S. Long of A. E. Long & Co., Ltd., E. E. Ritcey of Dominion Wheel & Foundries, Ltd., and Len Tolson of MacLean Publishing Co., Ltd.; *Secretary*, F. A. Laughlin of Spruce Falls Power & Paper Co., Ltd.; *Treasurer*, C. J. Garnett of Aluminum Co. of Canada, Ltd.; *National Director*, C. S. Webber of Page-Hersey Tubes, Ltd.; *Canadian Council*, W. G. Addison of Jas. Morrison Brass Mfg. Co.; *Board of Directors*, J. Stewart of Canadian Ice Machine Co., Ltd., F. G. Heard of Borden Co., Ltd., and A. I. Hill of Swift Canadian Co., Ltd.

Vancouver, B. C.—Officers for 1937-1938 have been elected by the **British Columbia Association**, as follows: *President*, E. Barteau of White Pass & Yukon Route; *Vice President*, A. W. Ker of Gordon & Belyea, Ltd.; *Secretary*, G. Fletcher of Dominion Bridge Co., Ltd.; *Treasurer*, R. C. Girling of Canadian Cannery (Western) Ltd.; *National Director*, E. Jardine of W. H. Malkin Co., Ltd.

JULY 12

New Orleans—Dinner meeting of the **New Orleans Association**, at the Jung Hotel. Review of the Pittsburgh convention of N.A.P.A.

JULY 13

Detroit—Golf outing and tournament of the **Detroit Association**, at the Birmingham Golf Club.

JULY 14

Kansas City—Meeting of the **Kansas City Association**, at the Kelvin Club, as guests of the Kelvinator Division of Richards & Conover Hardware Co.

Syracuse—Annual summer party of the **Syracuse & Central New York Association**, at the Syracuse Yacht and Country Club, on Oneida Lake. Swimming, golf, softball, bridge, and banquet.

JULY 15

Monroe, Mich.—Eleventh annual "Monroe Frolic" of the **Toledo Association**, at the Monroe Country Club. Golf, and buffet supper. The committee in charge consisted of A. J. Goetz, Chairman, Bert Pim, Cy Hawkins, and George Kibler.

JULY 18

Portland—Annual picnic of the **Oregon Association**, at the clubhouse and grounds of the Oregon Portland Cement Co., Oswego.

JULY 19

Detroit—Seventeenth annual Moonlight Boat Ride of the **Detroit Association**, on the Steamer *Put-In-Bay*. Music, contests, prizes, dancing, entertainment.

JULY 20

Tulsa—Plant visit of the **Tulsa Association**, at the Fred E. Cooper establishment.

St. Louis—Annual Summer boat ride of the St. Louis Association, on the steamer *President*.

JULY 21

Buffalo—Fifth annual family picnic of the **Buffalo Association**, at Meadowbrook Golf & Country Club. The afternoon was spent at sports and games. Buffet lunch. Dinner dance and entertainment.

JULY 24

Cincinnati—Annual picnic of the **Cincinnati Association**, at Pines Country Club. Games, door prizes, and chicken dinner.

Tacoma — Sixteenth annual picnic of the **Washington Association**, at Glendawn Park on Five Mile Lake. Softball, swimming, games, picnic supper.

JULY 30-31

Asheville, N. C.—Midsummer meeting of the **Carolinas-Virginia Association**, at Grove Park Inn. Speakers at the Friday evening session were: W. Z. Betts of North Carolina State Highway & Public Works Commission, "The Place of the Purchasing Department in the Industrial Organization"; Hill Hunter of Proximity Mfg. Co., "The Management's View of It"; Harold Dry of Cannon Mills, "Highlights of the Pittsburgh Convention". J. E. Sirrine of Greenville was the principal speaker at the Saturday session. H. D. Waters of Mill Power Supply Co. reported on coal, J. W. Knowlton of Charlotte on market trends, and W. G. Thomas of Duke Power Co. on national association activities. H. S. Pos was chairman of the committee on arrangements.

AUGUST 1937



BALANCED *to* YOUR NEEDS



COLD FINISHED SCREW STOCK

To provide users of SAE 1112 with a better screw stock for general fabricating purposes, B & L engineers have developed this grade of Bessemer into a well balanced screw steel, increasing its machinability and improving its physical properties.

This B & L grade of SAE 1112 will be found an ideal specification for the average run of automatic screw machine parts, particularly those fabricated on equipment of limited peripheral speed. If a high rate of production is a factor, B & L Ultra-Cut Steel may be used to advantage, as it is specially adapted for modern high-speed automatic screw machines.

Refer your fabricating problems to B & L engineers—they can help you select the right screw stock for your particular requirements.

Cold Drawn Bars — Ground Shafting — Ultra-Cut Steel — Special Sections — Extra Wide Flats — Alloy Steels



BLISS & LAUGHLIN, INC.
HARVEY, ILL. Sales Offices in all Principal Cities BUFFALO, N.Y.

KEEPING UP *with* McLAURIN-JONES

They find it a difficult job—keeping up with McLaurin-Jones. For we move pretty fast out here in Brookfield. And the McLaurin-Jones accomplishments today become the news in the paper world tomorrow.

STRIP ACTION BY VENEER MEN..

Perhaps it's a far cry from your business—the success story we're telling here. But read between the lines. You'll see why McLaurin-Jones research can be of help to you.

To hold veneer strips together in the press, veneer manufacturers use a special gummed tape—originated by McLaurin-Jones Co. over 25 years ago. When the strips are removed from the press, the tape is sanded off. But—certain veneers are so thin that the ordinary sanding required to remove the tape is out of the question. So—veneer men brought the problem to us.

Up went the "Do not Disturb" sign on the door of the McLaurin-Jones laboratory. Result: *Dri-Strip*—a duplex tape of strong kraft to which is added—by a special McLaurin-Jones developed adhesive—a sheet of thin, strong kraft tissue. After this tape is applied, the backing paper is stripped off, leaving the thin tissue strip on the veneer. Although not strong enough to be applied by itself, this strip is sufficiently sturdy to hold the veneer pieces together. Yet the slightest sanding removes it. Are veneer men enthusiastic? Just ask them!

The moral? Simply this: watch McLaurin-Jones. And when your business requires paper—for virtually any purpose—remember that McLaurin-Jones products can do a better job for you.



Ware Coated Papers and Postcards
Ideal Gummed Hollands
Ideal Photomount
Ideal Head Bands
Ideal Binding Cloth
Ideal Cloth Lined Papers
Ideal Gummed Box Stay

Blue Star Sealing Tapes
Ideal Gummed Cambric Tapes
Ideal Gummed Veneer Tapes
Ware Foils
Ware Box Covering Papers
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Gummed Papers

McLAURIN-JONES COMPANY

BROOKFIELD, MASSACHUSETTS

MILLS AT BROOKFIELD AND WARE

OFFICES AT NEW YORK • CHICAGO • LOS ANGELES

Foreign Trade is Expanding

The foreign trade of the United States expanded broadly during the first half of 1937. Exports were 23% greater in volume and 33% greater in value than for the corresponding period of 1936, while imports were 28% greater in volume and 45% greater in value. The unit values, or prices, were 8% higher on exports and 13% higher on imports, compared with a year ago.

With the exception of May, each of the months showed a balance of imports over exports, the unfavorable balance amounting to \$147,321,000 for the six months period. The bulk of this was accumulated in the early months, as the June import balance was around twenty million dollars, and May showed a favorable export balance. Chief contributing factors to the recession in June were a decline of 8 million dollars in cotton exports, 5 million dollars in automobiles, and 3 million dollars in iron and steel scrap, from the May figures.

The leading commodity groups, by value, exported during the half year period were automobiles and parts, raw cotton, petroleum products, industrial machinery, and semi-manufactured iron and steel. The greatest gains were also recorded in these classifications. Copper exports were 26 million dollars higher than a year ago, agricultural implements up 13 million, electrical machinery up 12 million. Only tobacco showed a net decline.

Rubber was the heaviest imported commodity, while the greatest gains were recorded in vegetable food products, textile fibers and manufactures, and inedible vegetable products, rubber, wool, grains, oil seeds, cocoa, coffee, raw silk, precious stones, tin, newsprint, and paper base stocks.

The outlook for the second half year indicates probable increases in cotton and wheat exports as the harvest progresses, unless pegged prices interfere with free movement of the cotton crop. Diminishing imports of farm products are also anticipated.

Obituary

EDWARD H. SCHUMACHER, 60, Purchasing Agent for the Crocker First National Bank of San Francisco, died June 4th, after a long illness. He had been associated with the bank and its predecessors for forty-one years.

COL. THOMAS J. FLYNN, U.S.A., 56, died at St. Louis, July 5th. Col. Flynn was purchasing agent for the New York Medical Depot of the Army Base from 1930 to 1934, and at the time of his death was commanding officer of the St. Louis Medical Depot.

GEORGE H. N. HORNBY, 61, formerly of the purchasing department of the American Smelting & Refining Co., up to the time of his retirement from active business, died July 6th at Old Greenwich, Conn.

GEORGE A. PRATT, 61, for the past 24 years associated with the Rockwood Sprinkler Co., Worcester, Mass., as assistant purchasing agent and since 1927 as purchasing agent, died July 6th at his home in that city. Before coming with Rockwood, Mr. Pratt was with the purchasing department of the Grinnell Co., of Providence.

EDWARD J. MURPHY, 59, retired purchasing agent for the Kraft-Phoenix Cheese Corp., died July 10th at his home in East Orange, N. J.

DANIEL Y. ROSE, President and Treasurer of the R. L. Rose Lumber Company, Providence, and long an active member of the Rhode Island Purchasing Agents Association, died at his home in that city July 13th, after a brief illness.

HENRY A. BORNSCHEVER, 57, for 26 years associated with the city purchasing department of New York, as purchasing agent for the Borough of Queens, for the Department of Hospitals, and more recently for the Department of Docks

and Ferries at St. George, Staten Island, died July 13th at his home in Hollis, Queens, of acute indigestion.

EDWARD HAVENER KELLEY, 67, for the past nineteen years purchasing agent for the University of Maine, died at his home in Orono July 17th, after an illness of several weeks duration. Mr. Kelley was a graduate of the University, then known as Maine State College, in the class of 1890, and was consistently active in alumni affairs. He was military secretary on the staff of Gov. Cobb in 1905-1909, vice president of the Orono Chamber of Commerce, president of the Public Library Association, and otherwise prominent in civic enterprises. He had spent several years in newspaper work before joining the administrative staff of the University.

DR. HENRY PARKER WILLIS, 62, died July 18th at Oak Bluffs, Mass., where he had gone to recuperate from a heart ailment. Dr. Willis was widely known among economists through his writings on monetary problems, his service as dean of the College of Finance at George Washington University, and as Professor of Banking at Columbia University for the past two decades. His outstanding public achievement was as co-author, with Senator Carter Glass, of the Federal Reserve Act of 1913. Purchasing agents have profited greatly through his work as associate editor of the *New York Journal of Commerce*, and as a member of the N.A.P.A. advisory staff. In the latter capacity he was a regular contributor to the N.A.P.A. *Bulletin*, writing on current aspects of the financial and monetary situation.

RALPH A. COBB, 62, Purchasing Agent and traffic manager of the Curtice Brothers Co., Rochester, N. Y., died at his home in that city, July 26th. He had been associated with the Curtice organization for 31 years.



**A DAMAGED PACKAGE
MAKES A MIGHTY POOR
SALES REPRESENTATIVE**



Boxes, cartons (corrugated and fibre), bundles, skids, bales, and packages of all kinds are reinforced to stand heavier shocks with lighter materials under Signode packing methods. The shipper and the consignee both gain through lower costs, but the shipper earns added good will.

● What shall it profit a manufacturer to spend time and money developing a sales-stimulating package . . . if it arrives at its destination looking as sloppy as a water-front hobo?

Says A. L. Green, Freight Claim Div. Assn. of American Railroads: "The shipper who does not know what proportion of his shipments is reaching customers in non-salable, non-usable condition is neglecting an important source of dissatisfaction and possible loss of business."

Learn how and why packages protected with Signode Steel Strapping reach their destination as neat as West Point cadets on parade. Signode Steel Strapping protection does more than safeguard packages and merchandise. It cuts packing and shipping costs as well. Write for facts on Signode advantages.

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Coordination SPELLS Championship

Relatively few persons who appreciate championship performance, realize the vitally important parts which are played by perfect coordination and team-work.

In the manufacture of MARATHON, champion of typewriter ribbons, this is particularly true. Only an organization of long experience, with splendid team-work and perfect coordination of laboratory and production facilities, could create this outstanding SUPER SILK RIBBON!

GREATER RIBBON VALUE—

- MARATHON'S superb clarity of write—*inestimably important in correspondence, record keeping, billing and book-keeping;*
- MARATHON'S greater number of carbon copies at one writing—all beautifully crisp and clear;
- MARATHON'S longer ribbon wear, hence economy as well as beauty and legibility.

Write for test data and prices.

COLUMBIA

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Main Office and Factory
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New York, Chicago, Philadelphia, Pittsburgh,
Cincinnati, Nashville, New Orleans,
Kansas City, Milwaukee,
Minneapolis
—also—
LONDON, ENGLAND MILAN, ITALY SYDNEY, AUSTRALIA



Training for Junior Buyers

The purchasing agent for a large eastern corporation, whose staff includes a half dozen buyers, has sacrificed a part of the sacred privacy of his personal office by installing an extra desk in one corner. It is not constantly in use, but during that portion of his day which is devoted to interviews with salesmen he frequently calls in one of the junior assistants in the department for the purpose of observing the general course of such interviews.

This purchasing executive considers the plan a most effective means of practical training without the loss of time and efficiency and without the hazards of possibly unwise commitments which might be made by an inexperienced buyer assigned to interviewing "on his own" before he had the opportunity to familiarize himself with the personal aspects of the job.

"Interviewing cannot be taught nearly as effectively as it can be demonstrated," he says, "largely because we are likely to overlook some fundamentals which have become so obvious and commonplace to us that we neglect to mention them. Furthermore, purchasing technique in an interview must largely be determined by the sales technique employed. Most forms of sales attack and pressure, while thoroughly legitimate, depend largely on the element of surprise. To an old-timer in the game, there is little of this surprise factor, for the simple reason that we have seen practically all of these methods in use time and time again, and have learned to recognize the familiar angles of approach in whatever guise they may be presented. The junior buyer does not have this advantage of experience, but he can quickly see that many such lines of attack which would superficially impress him as fresh and startling, can be resolved to a few basic situations, whereupon the business of buying can proceed in a normal course. There is no better way of developing poise and confidence than by seeing this done."



ALUMINUM OXIDE
SILICON CARBIDE
CORUNDUM
(AFRICAN)
TURKISH EMERY

Refiners and Makers
of
ABRASIVE GRAINS
AND
FLOURS

AMERICAN ABRASIVE COMPANY
WESTFIELD, MASS.

COILED WIRE SPRINGS

WIRE FORM SPECIALTIES



Springfield, Ohio, U. S. A.

*"Where Your Patronage
Is Appreciated"*

Gain in "Real" Income

An analysis of income and living costs, made by Cambridge Associates, Inc., shows that the average citizen is 18% better off today than he was a year ago. Increased wages and salaries give him a cash income of \$1.26 compared with the 1936 dollar, and cash outgo on comparable expenditures is up from \$1 to \$1.07. The cost of various items of living are estimated as follows, compared with \$1 a year ago: Food, \$1.03; clothing, \$1.05; shelter, \$1.12; miscellaneous, \$1.07.

Coal Classification

(Continued from page 22)

Table II gives the symbols adopted for grading coals according to ash, softening temperature of ash, and sulphur content.

Importance of Classification

The class and group designation of a coal in the scale of rank is of primary importance in the selection of a fuel for most purposes. In a few cases, such as coal for coke and fuel for locomotives and for burning lime, and cement and ceramic products, the broad class distinction of anthracitic, bituminous, subbituminous or lignitic is sufficient, but for all other uses consumers require the more restricted range of properties that are expressed in the group classification.

Grade classification requirements vary considerably with different uses. They are of ordinary importance for fuel used in burning common brick and tile, cement and lime; and for locomotive, spreader stoker and domestic fuel. They are of more than ordinary importance for chain grate and over-feed stokers, for pulverized coal firing and cargo fuel, and for the manufacture of gas and the burning of whiteware and refractories. And they are very essential in coal burned with underfeed stokers and in hand-fired furnaces, in metallurgical and bunker coal, and in fuel used for burning terra cotta.

Size is only of ordinary importance for metallurgical, ceramic and pulverized fuel, and for coking coal. Other uses vary from "more



DEPENDABILITY

Dependability is only developed over a long period of years and is reflected through both manufacturer and product. Dependability of manufacturer means customer confidence . . . that source of supply will remain constant no matter what the price or market conditions, that established policies of service and fair dealing will be rigidly followed. Dependability of product comes from constant maintenance of quality, progressiveness in design, reputation for engineering skill, precision of finished goods, care in inspection. Especially during period of extensive and hurried buying, where price may be of secondary importance, dependability of both manufacturer and product is of the utmost importance when considering sources of supply.

Since 1845, almost a century, R B & W has stood for dependability—and no regular customer has ever had cause to lose confidence in the steady and consistent supply of EMPIRE Bolts, Nuts and Rivets. Small purchaser as well as large—manufacturer, jobber and retailer—all appreciate this asset.

In addition to such policies of fair dealing, equitable prices, quality products, large stocks and good service—R B & W has for years also maintained an experienced and progressive Engineering Staff to help study, simplify and standardize bolting problems in every industry.

BOLTS: Carriage, Machine, Lag, Plow, Stove, Elevator, Step, Tap, Wire Wheel & Rim, Battery, U-Bolts, Semi-Finished, Automotive Replacement

NUTS: Cold Punched, Semi-Finished, Hot Pressed, Case Hardened, Slotted, Castle

PINS: Clevis, Hinge

RIVETS: Standard, Tinners', Coopers', Culvert

SCREWS: Cap, Machine, Hanger

WASHERS: Plate, Burrs

MATERIALS: Alloys, Steels, Non-ferrous Metals

RODS: Stove, Seat, Ladder

PLATED PARTS: Cadmium, Zinc, Chromium, Nickel, Hot Galvanized, Copper, Tin

SPECIAL UPSET AND PUNCHED PRODUCTS

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NATION-WIDE AIR EXPRESS — FASTEST!

Call the nearest Railway Express office, and your shipments will be rushed by Air Express at 3-mile-a-minute speed! Low rates. Day and night planes direct to 216 key cities in the United States and Canada—to Latin America, Honolulu and the Far East. Remember, for super-speed, phone AIR EXPRESS Division, RAILWAY EXPRESS.



FOR CORROSION-PROOF SPRINGS

SPECIFY

SEYMOUR

PHOSPHOR BRONZE

Corrosion-failure of a tiny spring may stall a very large and important machine, or cause a manufactured product to lose its market.

Extreme corrosion-resistance, toughness and ability to stand fatigue has placed springs of Seymour Phosphor Bronze in innumerable machines and products purely because of their reliability in hard service or damp conditions. May we send you the "Seymour Phosphor Bronze Manual?" charge or obligation.

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SEYMOUR
MFG. CO.
55 Franklin St.

SEYMOUR,
CONN.



than ordinary importance" to "very essential."

For most uses, the importance of impurities ranges from ordinary to more than ordinary importance. With high cost of ash-removal, slagging of boiler tubes and for certain special purposes the impurity factor is rated "very essential."

The variety or type classification is of less commercial importance than either grade or rank classification. By far the greatest portion of American coals are of the common banded variety. The non-banded coals, cannel and boghead, are of limited local occurrence, and they are used principally for domestic fuel, especially open-grate fires.

The banded coals consist of bright and splint coals. Bright coals may be either caking or non-caking. Splint coals usually are poorly caking and free burning. For this reason, variety or type classification is important in all uses where caking in the fuel bed affects combustion or furnace capacity.

Future Developments

It is expected that the present tentative standards for the classification of coal by rank and by grade will be adopted as standard by the American Society for Testing Materials this year. The American Standards Association also is expected to approve them as American Standards.

No further modifications in the rank specifications are likely for some years. However, the grade specifications might well be expanded to include other use factors not now included. Examples of such factors are friability, grindability, plastic properties, etc. Considerable research is required to develop better testing methods for these properties and to correlate the test results with the performance of the coal in commercial use.

Another year or two may elapse before standard definitions for varieties of coal other than those of rank or grade are formulated. In the meantime, the tentative definitions given in this paper may be used.

Textile Statistics

(Continued from page 19)

important factor are checked up against those of another by him and his staff, and conclusions are arrived at which have authority in the textile industry. Thus when Mr. Murray stated a short time ago that "sales of print cloths and carded broadcloths are estimated in the trade at 150 to 175% of production, constituting the largest amount of business written in any one week since March," this was an accurate enough barometric reading for the members of the textile industry itself.

The good old reliable Department of Commerce also issues several important groups of textile statistics. Such are those pertaining to cotton consumption, which appear at the middle of the month for the preceding month; also figures on spindle activity, which appear thirty days following the month under review. The latter prove of interest to the trade yet are no genuine barometer of activity since the machine activity may be on heavy goods and not on the more intricate and time-consuming lighter goods.

Important, too, are the Department of Commerce statistics on wool consumption and machinery activity. In addition, the National Association of Wool Manufacturers

furnishes the trade press with figures on billings, shipments, and unfilled orders for woolen goods, the members of the trade considering the last as the most accurate barometer.

The various textile trade barometers are carried in the more or less technical press, such as the *New York Journal of Commerce*, the *Fairchild* publications, and those daily newspapers which give a good play to business news such as the *New York Times*. Just as we write this, one of the *New York* dailies has given good headlines to cotton consumption figures as compiled by the Census Bureau. In the eleven months from August through June, 7,361,737 bales of cotton had been consumed by domestic mills. The previous all-time peak was 7,189,585 bales for the twelve months of the 1926-27 season. Cotton spindles active during June numbered 24,555,716 compared with 24,659,296 during May.

On textile prices the *New York Journal of Commerce* lists five descriptions in the general daily commodity table as being representative: Cotton middlings; print cloths; wool, territory fine, Boston; silk, crack double extra; and bur-lap. Prices are compared with a day ago, month ago, and year ago.

Raw cotton statistics are in a class by themselves and a favorite indoor sport of the cotton commission houses is to estimate the U. S. crop prior to the Government estimate, it being assumed, in view of lack of proof to the contrary, that the Government figures are the "ultimate ultimate" in accuracy and authority. It is when the cotton bales are broken open that the textile industry itself begins.

Finally, how important is cotton mill activity as a barometer? In compiling its weekly index of business activity, the *New York Times* assigns weights to its various components. The groups of carloadings and steel production each command weights of 25; electric power production carries a weight of 20, while automobile production, lumber production, and cotton mill activity each carry the weight of 10, thus totaling 100.

Improved WIREGRIP BELT HOOKS

WIREGRIP comes on processed cards that prevent waste—every hook can be used. Protects fingers. Applied with a WIREGRIP Lacer or any other standard make belt lacing machine.

Flexible BELT LACING

STEELGRIP is a stronger lacing for all power and conveying belts. Clinches smoothly into belt, compresses ends, prevents fraying. 2-piece hinged rocker pins prevent excessive wear. In boxes or long lengths.

Write for Catalog

ARMSTRONG-BRAY & CO.

"The Belt Lacing People"

321 N. Loomis St.
Chicago, U. S. A.



✓ for Economy



AJAX service is easy on the budget.

- ✓First cost low; same for upkeep.
- ✓No wastage with AJAX one-cup-at-a-time Dispenser.
- ✓Sick leaves fewer with AJAX cups and dust-tight Dispensers.
- ✓Dispenser-loading time a minimum with 250-cup carton.
- ✓Handsome black Bakelite Dispenser, or steel in colors, appropriate anywhere.
- ✓Employees approve convenient, wedge-shaped cup—and good will has its practical value, too.

Free samples in cigarette desk humidors for executives—also supplier's name.



LOGAN DRINKING CUP CO., DIV.
United States Envelope Co.

68-P Prescott St., Worcester,
Mass.

270 Broadway New York
221 No. LaSalle Chicago

PACIFIC COAST ENVELOPE CO., DIV.
416 Second St., San Francisco,
Calif.

AJAX
Cups and Dispensers

NEW PRODUCTS & IDEAS



**LUBRICANT
PUMP**

No. 443

A QUICK AND CONVENIENT MEANS of dispensing semi-liquid lubricants is this "Quik-Shot" pump unit built into a bedplate corresponding to the shipping lid of a standard 25-lb. grease pail. The lid is equipped with a gasket and locking steel band. A plunger pump forces the lubricant through a 6½ foot length of grease-resisting rubber hose, fitted with curved nozzle and shut-off valve. The nozzle is cadmium plated, and the entire assembly can be carried around as a completely self-contained lubricator unit, using the original bulk container and dispensing the grease in any required quantity without waste.

Use coupon below



GASOLINE HOSE

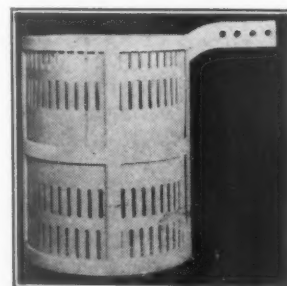
No. 444

SYNTHETIC RUBBER THAT is not affected by gasoline is used in this new hose, furnishing an extremely smooth surface for free flowing. The tube is cased with a steel wire reinforcement woven into a cotton jacket, and the outer cover is of abrasion resisting rubber to take the mechanical wear. The

wire winding insures that the hose will not collapse and prevents breakage and separation at the couplings. The entire assembly is light in weight, flexible, and easy handling. Manufactured in ¾, 1, and 1¼ inch sizes.

Use coupon below

**HEAT TREATING
BASKET**



No. 445

FOR HANDLING SMALL parts in salt and cyanide baths, this basket has been developed, making use of a combination of rolled and cast heat-resisting "Q-Alloy." It is available in a number of shapes and sizes, and handle arrangements, adapted to all usual requirements of this nature. The frame and perforated bottom are cast; they will stand up under hard usage, generally outlasting the sheet liners. The linings are made of sheet, containing drainage slots. They are readily replaceable.

Use coupon below

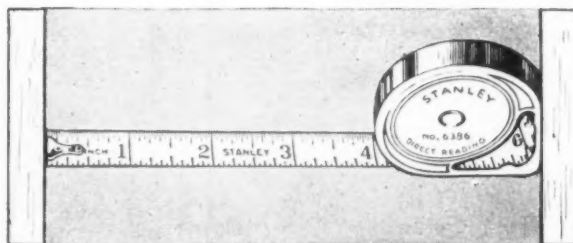
SUCTION CUP



No. 446

THESE RUBBER SUCTION CUPS serve a variety of purposes, such as handling lenses for grinding, picking up flat smooth work, preventing slippage, as attachment hooks, trays, etc. Threaded studs in a range of standard sizes permit adaptation to many uses. In the improved design shown in the illustration, a series of ridges in the rubber unit give increased holding ability.

Use coupon at left



DIRECT READING INSIDE RULE

No. 447

A HANDY, WATCH SIZE TOOL for the measurement of inside distances as well as straight distances, circumferences, and irregular shapes. The flexible but rigid steel blade is finished in a white baked enamel, with black graduations. The blade is

PURCHASING

11 West 42nd St.
New York, N. Y.

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Name

Company

Address

City State

6 feet long, $\frac{1}{2}$ inch wide, graduated in 32nds of an inch for the first six inches, and by 16ths on both edges for the entire length of the rule. A special feature of design is a red indicator built into the case providing direct reading for exact inside measurements, thus minimizing the chance for error.

Use coupon page 48



PAPER SHREDDER

No. 448

ACCUMULATED WASTE PAPER, including cardboard and corrugated, can be shredded to any width for use as packing by this rotary disc cutter, powered by a motor driven worm-gear reducer. It is capable of operating at a speed of 21 sheets of newspaper per second, and is said to absorb its cost in 128 hours of running. There are suitable guards to protect both the machine and the operator, and oil seals on the bearings keep oil from reaching the paper and lint from getting into the bearings.

Use coupon page 48



PORTABLE SURFACE GRINDER

No. 449

THIS IS A PRODUCTION tool operating on standard 220 volts 3 phase 60 cycle current, said to compete successfully with high cycle and compressed air equipment. The motor unit is built on the new poly-phase theory, designed to develop more power per pound. Maintenance is minimized by the simple construction—no gears, no commutator, and no brushes—and by the conservative speed of 3,600 r.p.m. at which it operates.

Use coupon page 48



RUBBER PAIL

No. 450

THE BODY OF THIS PAIL is molded in one piece of acid-resisting latex, with a thick reinforcing rim around the top edge and furnished with a detachable handle of stainless steel.

AUGUST 1937

NEW TAGS for OLD!

CAMPBELL TAGS... ...the Old

1. H. J. BARON COMPANY
Chemicals and Specialties
EL PASO, TEXAS
Bldg. 8102
2. H. D. EDWARDS & CO.
BURNER, COOKER, MELTING, PACKING & MORE
167-167 EAST LARNED ST. DETROIT, MICH.
3. The Freeman Company
1511 N. BAGINAW ST.
FLINT
4. SOUTHERN SUPPLY CO.
Mfg. Electrical and Plumbing Supplies
JACKSON, TENNESSEE

CAMPBELL TAGS... ...the New

1. CHEMICALS
H. J. BARON COMPANY
MILLS BLDG. EL PASO, TEXAS
SPECIALTIES
2. H. D. EDWARDS & CO.
MILLS RAILROAD & VESSEL SUPPLIES
167 East Larned Street, Detroit, Mich.
3. THE FREEMAN COMPANY
1511 NORTH BAGINAW ST.
FLINT
4. SOUTHERN SUPPLY CO.
JACKSON, TENNESSEE
Sales Offices in
Detroit, Chicago,
Cleveland, St. Louis,
Kansas City, Toledo,
Racine, Akron and
Indianapolis.

SOUTH BEND, IND.

CAMPBELL BOX & TAG CO.

Write for Samples Prices and Suggestions

GEARED

to meet the Urgent demands
OF YOUR PRODUCTION LINE

Consider these points when you look for a dependable source of spring parts:

INTELLIGENT HANDLING OF SPECIFICATIONS
PROMPT, CERTAIN ACTION IN TOOLING UP
DELIVERIES TO MEET YOUR PRODUCTION
UNIFORM QUALITY FROM START TO FINISH
ONE SOURCE OF SUPPLY FOR MANY PRODUCTS
EFFICIENT PLANNING FOR GREATEST ECONOMY

Controlled quality from steel to finished part is Barnes' answer to the day's demand for production and still more production. A modern steel mill owned and operated by Barnes is capable of producing stock for almost any requirement, every day. Large amounts are always on hand for quick conversion into the kind of spring you need.

The Wallace Barnes Company • BRISTOL, CONNECTICUT
DIVISION OF ASSOCIATED SPRING CORPORATION
SPRINGMAKERS FOR MORE THAN THREE QUARTERS OF A CENTURY

Barnes-made SPRINGS

PAGE 49


WELDING
of Large Pieces
 PUT your big welding jobs up to us—
 Investigate our facilities and extensive
 experience. Profit by the advantages
 Smith's Welding Service provides!
 S. MORGAN SMITH CO.
 YORK, PA
SMITH *by*

Look for the  *Arm-and-Hammer*
ARMSTRONG BROS.
Improved PIPE TOOLS
 The most complete
 line of Pipe Tools
 made. Standard
 types, each with
 many improved de-
 sign and construc-
 tion features.
 Lighter, balanced
 tools with drop-
 forged, hardened
 and alloy steel
 parts wherever
 they will add to
 strength or tool life.
 ARMSTRONG BROS. TOOL CO.
 "The Tool Holder People"
 303 N. Francisco Ave. CHICAGO U.S.A.

 For tight places
 —the Ratchet
 Stock and 3-
 wheel (Barnes
 Type) Pipe Cut-
 ter.
Write for Catalog

Always at Your Service
ANTHRACITE
COKE
BITUMINOUS
 You will find this
 a good house to do business with
YATES-McLAUGHLIN, INC.
Rand Building Buffalo, N. Y.

The spout is designed to permit pouring in full stream or small amounts, and the front wall is made thicker to provide strength against collapsing when it is rested against a tank or other container for pouring. Flexible and not susceptible to injury by blows or bending, it is suited to heavy service. Diameter 11 inches, depth 10 inches, weight 6½ pounds.

Use coupon page 48

PORTABLE DRAFTING BOARD

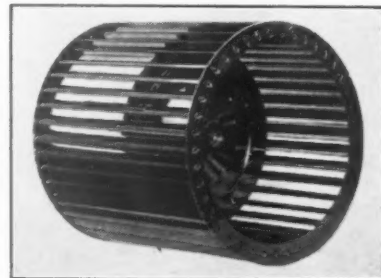


No. 451

FOR DESK OR TABLE USE, this new drafting board offers many conveniences. It is of smooth hard composition, light in weight, unaffected by oil or water, and proof against warping or cracking. A pair of formed rods support the board at an easy working angle, and rubber feet prevent slipping. A straight edge is mounted in side guides, thus eliminating the necessity for a loose T-square. Paper or tracing cloth is held in place by means of Scotch tape. Three standard sizes range from 12 × 16 to 20 × 24 inches.

Use coupon page 48

BLOWER IMPELLER

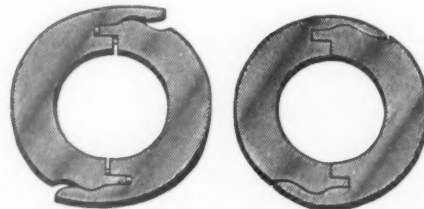


No. 452

DESIGNED TO MEET THE modern demand for higher pressures in air conditioning work, this new impeller embodies greater rigidity, closer tolerances, and more accurate balance. The formed ends of the blades in this assembly slip into sockets in the side rings and are locked firmly in exact position. A center plate carries a machined hub for mounting on a self-adjusting bearing with 3-year lubrication, while vibration and noise are eliminated through use of active rubber cushions. A 3-speed drive adapts the equipment to variation in seasonal requirements. The impeller is stocked in five standard sizes from 10 to 18 inches in outside diameter and with capacity from 1,000 to 5,000 cu. ft. per minute.

Use coupon page 48

SPLIT WASHER

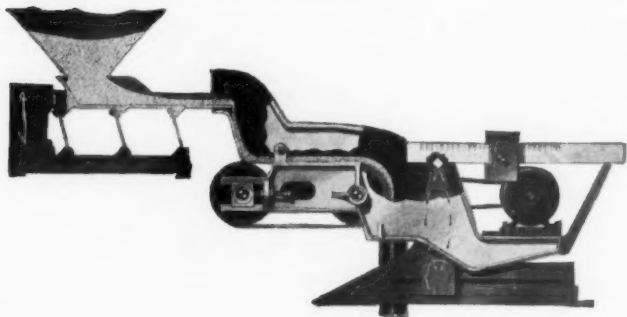


No. 453

EXCESS END-PLAY CAN BE TAKEN up quickly, easily, and economically by means of this collar, which consists of two interlocking grooved parts that slide together around the

shafting without dismantling the equipment or disturbing bearings, and are securely locked by tapping the overlatch in place. There are no bolts, lugs, or pins to shear off in use and cause the collar to come apart. The device is furnished in malleable or bronze, and will fit every need where a solid collar is used. It is stocked in a wide variety of standard sizes and can be made to any special size or thickness.

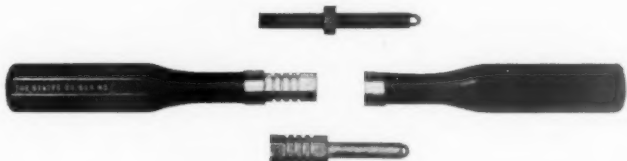
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CONTINUOUS FEED WEIGHER No. 454

GRANULAR MATERIALS are fed to a moving belt in constant quantities by this new device, in which a control, actuated by the scale, maintains a constant weight of materials on the belt. Accuracy can be held to within 1% of the set weight. The materials pass from an overhead hopper through a vibratory feeder, which is slowed down or speeded up by the scale control. Dust is eliminated by the use of a steel enclosure, with windows to permit watching the movement of the material. There are several sizes in the line. The smallest handles materials weighing up to 100 lbs. per cu. ft. at a feed rate ranging from a few pounds up to 2 tons per hour.

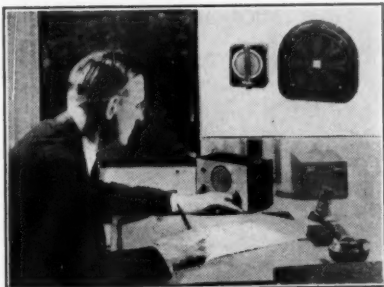
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INTERCHANGEABLE SCREWDRIVER AND WRENCH No. 455

USEFUL IN THE ASSEMBLY of small electrical apparatus is this molded handle with interchangeable screwdriver bits and sockets for hexagon nuts from $\frac{5}{16}$ to $\frac{1}{2}$ in. A particularly deep socket enables the wrench to clear projecting studs.

Use coupon page 48

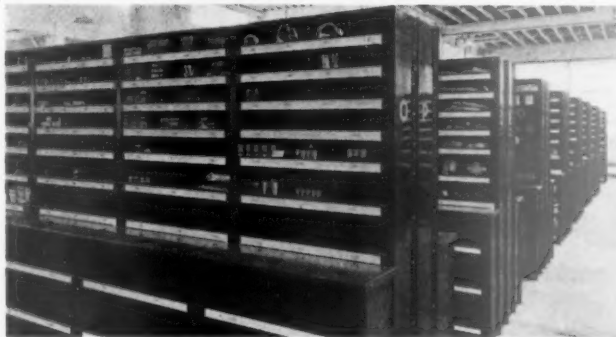


COMMUNICATING SYSTEM No. 456

TWO-WAY COMMUNICATION IS provided in this recently improved system, a selector switch on the master cabinet making connections with similar stations at various

AUGUST 1937

A LASTING ASSET



● *Lyon Steel Shelving* is a lasting asset. It is not affected by dampness . . . resists fire . . . will not warp, shrink or split. All parts are interchangeable . . . permitting quick, low-cost rearrangements and additions to meet changing conditions. Mail coupon for full details on industry-tested money-saving features.

LYON
STORAGE EQUIPMENT
Service
LYON METAL PRODUCTS,
INCORPORATED
AURORA ILLINOIS

Lyon Metal Products, Incorporated
3308 River Street, Aurora, Illinois

Please send catalog showing money-saving advantages of () Steel Shelving; () Tool Room Eqp.; () Shop Boxes; () Send Salesman.

Name
Address
City State

"NEW CONDITIONS
FACE US" . . .
... From PURCHASING
for June 1937

CONSIDER CLEANING

TODAY, the chances are your production cleaning must be done faster. There is more of it. You can't tolerate delays, or time out.

Then, again, your work may be more difficult, as it would be if you must clean sensitive metals, or have to strip more tenacious finishes or remove insoluble dirt.

New Oakite materials and new Oakite methods are available that will help you meet and solve present-day cleaning problems, with the speed and economy modern production demands.

Write. Ask us for the information you want.

Manufactured only by

OAKITE PRODUCTS, INC., 54 Thames St., New York, N. Y.
Branch Offices and Representatives in all Principal Cities of the U. S.

OAKITE
SPECIALIZED INDUSTRIAL CLEANING MATERIALS & METHODS

PAGE 51

NO BELT SLIPS with VACUUM CUP METAL PULLEYS



Pat'd U.S.
Canada
Great Britain

30 DAY FREE TRIAL OFFER

GUARANTEED to:

Eliminate belt slippage and power loss because the belt is sealed to pulley at vacuum contacts. . . increase life of belts and equipment. . . enable machines to take larger cuts and operate at maximum capacity. . . wear indefinitely. . . keep belts from flying off. . . Sizes from 2" up to 72" . . recommended for short center drives. . . Try one at our risk on your worst drive.

Vacuum Cup Metal Pulley Co., Inc. 1010 Ford Bldg.
Detroit, Mich.

BARNES BETTER *Huck Saw* BLADES

Just try Barnes Blades! Tell us your cutting problem—let us suggest a blade to whip it economically.

W. O. BARNES CO., INC. Detroit, Mich.



BEAVER COAL

Bituminous Coal

MINES: Scalp Level, South Fork, Hastings and La Rayne Districts of Penna., and Fairmont District of West Virginia.

SIZES: Lump — Egg — Nut — Pea — Stoker — Mine Run—Especially Prepared Coal for Pulverizing.

CORTRIGHT COAL COMPANY

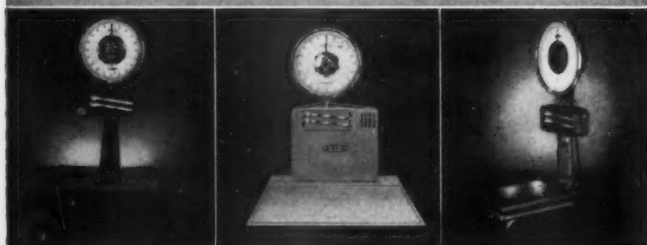
PENNA. BLDG.
PHILADELPHIA

ONE BROADWAY
NEW YORK

KRON

DIAL SCALES
for industry's every need

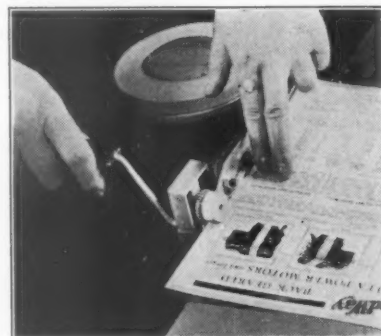
THE KRON CO.
BRIDGEPORT CONN.



points in plant or office, up to a maximum of ten, or with a number of combination speaker-receivers either individually or simultaneously. A volume dial is also attached. Each station is open at all times to receive a call-in signal without interference from background noises. The amplifier unit is connected to the cabinet by a cable, and plugs into either 110 or 220 volt a. c. circuit. Stations are connected by wiring, and can be located up to 1,000 ft. apart.

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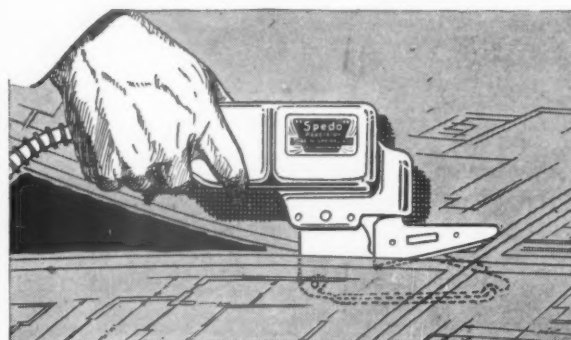
SHEET BINDER



No. 457

THIS SIMPLE AND COMPACT machine folds and attaches a binding strip to the edges of any card, sheet, drawing, print, chart, etc., without the use of heat or moisture. This treatment prevents tearing or mutilation in handling and greatly increases the life of such documents. The resulting job is neat and uniform, and specially prepared transparent cellulose tape is provided in any color. The device can be used on sheets ranging in thickness from tissue up to $\frac{1}{16}$ of an inch; also for binding together two sheets of the same or dissimilar material. Using creped paper tape it will follow the edge of discs or outside curves.

Use coupon page 48



ELECTRIC SHEARS

No. 458

THESE NEW SHEARS, designed for trimming blueprints, will cut paper in a straight or curved line at high speeds, and a line can easily be followed. The lower blade is stationary. The upper blade, actuated by an electrically operated vibrator element, moves rapidly up and down through a short distance. Adjustment of the stroke is by means of screws under the vibrator housing cover. The blades are adjustable, so that a slight resetting alters the spot at which the greatest cutting wear occurs after lengthy service, thus utilizing the entire length of the blade. Being double-edged, they can be turned and the process repeated before resharpening is necessary. Replacements are low in cost. The device plugs into any 110 volt a. c. line.

Use coupon page 48

New Problems in Paper Making

The development of new types of fibers and new mineral coating and filling materials for paper making, has raised a number of problems in the past several years that were formerly unknown, according to the National Bureau of Standards. Writing and printing papers are classified commercially as to quality according to rag content, but now special refining treatments are producing fibers from wood and other fibrous materials, which have qualities similar in many respects to the various grades of rag fibers.

The Bureau is therefore recommending the purity of paper fibers as a primary basis of classification for such papers. Improved wood fibers are supplanting to some extent the rope fibers used to make tough, durable paper for such products as tags and bags. To meet this situation, the fiber specification for jute tag paper purchased by the Government Printing Office has been changed to require a minimum amount of either rope fiber or super-purified wood fiber.

New developments in mineral filling and coating materials are the use of titanium oxide, zinc sulphide, calcium sulphite, and greatly increased use of chalk. The last three present some complications in testing. When an inert material such as clay or titanium oxide is used, the ash of the paper is a satisfactory measure of the amount of filler or coating mineral present, but the other mineral materials partly volatilize in ashing the paper, and therefore the original amount present must be calculated after the material has been identified by analytical tests.

The copper number of paper, which is used as an index of its probable stability, cannot be determined if zinc sulphide is present. The presence of chalk complicates the use of fibers from repulped waste papers because it neutralizes alum used for beater sizing paper with rosin, with production of foam caused by liberated carbon dioxide gas.

AUGUST 1937

Get a Copy of This New Catalog on—

Sectional Post Binders are still the most widely used type of housing for business records.

CESCO'S complete line of stock and special sizes of this popular binder is profusely illustrated and prices clearly indicated in this new price list.

Better still—A new method of pricing makes possible lower net prices on quantity orders.

Write Now!

And learn how you can save money on your binder requirements.



THE C. E. SHEPPARD COMPANY

4401—21st Street

Long Island City, N. Y.

for Smooth Running

BEARINGS



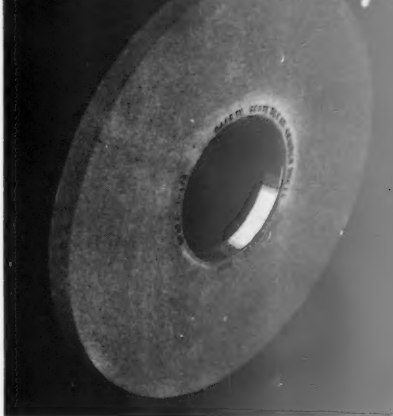
SMOOTH performance plus years of service—that's what your customers demand and get with Abbott Steel Balls in the bearing assemblies.

Ready when you want them—draw on our complete stocks that guarantee an uninterrupted flow of materials to your production departments.

THE ABBOTT BALL CO.
1058 New Britain Avenue
HARTFORD, CONNECTICUT

ABBOTT
BEARING BALLS

NOTEWORTHY!



The customer turn-over at Safety is probably the lowest in the grinding wheel industry. Once a customer—always a customer seems to be the rule.

Grinding wheels for any purpose.
High grade portable and floor grinders.

The Safety Grinding Wheel and Machine Co.
Springfield, Ohio.

SAFETY

PAGE 53

BUY



● A Northern Kraft Tape with a special glue formula and "TREAD" Gumming account for its superior quality and many exclusive advantages.

Sterling
"TREAD" GUMMED TAPE

THE GUMMED PRODUCTS CO.
 OFFICES TROY, OHIO MILLS
 MAKERS OF TROJAN GUMMED TAPE
 Sole Branches: Chicago, Cincinnati, Cleveland, Los Angeles, New York, St. Louis

U. S. Shipping Increases

A substantial increase in construction of new vessels during the past year under the classification of the American Bureau of Shipping, has been reported by that Bureau. A month ago, on July 1st, there were ninety-seven vessels under construction, representing a tonnage of 289,535, as compared with eighty-seven vessels, with a tonnage of 179,105, on August 1, 1936. During July, nine other vessels were added to this list, with a gross tonnage of 33,795.

Most of the larger vessels now under construction are of the oil tanker class. Outside of this class, two bulk steam freighters of 8,500 tons each are being built for the Pittsburgh Steamship Co., by the American Shipbuilding Co., of Lorain, Ohio, and two additional bulk steam freighters of the same tonnage and for the same company by the Great Lakes Engineering Works, of Ecorse, Mich.

There are thirty-one oil tankers under construction, in all. In some few of these, the tonnage runs as low as 1,520, but most of them range from 7,000 tons upward to as high as 11,400 tons. The latter are being built by the Sun Shipbuilding & Dry Dock Co., of Chester, Pa. Two of them are for the Atlantic Refining Co., and one for the Sun Oil Co.

Among the other vessels of fair sized tonnage now under construction are the following: By the Bethlehem Shipbuilding Corp., four oil steam tankers of 7,600 tons

each for the Standard Oil Co. of N. J.; one tanker of 8,000 tons for the Texas Co.; two tankers of 7,100 tons each for the Gulf Oil Corp.; and three passenger cargo vessels of 9,000 tons each for the Panama Railroad & Steamship Co.

The Federal Shipbuilding & Dry Dock Co., of Kearney, N. J., is building four tankers of 7,600 tons each for the Standard Oil Co. of N. J., and two of the same tonnage for the Pan American Petroleum Co.

The Manitowoc Shipbuilding Corp. of Wisconsin is building one oil tanker of 5,500 tons for the Standard Oil Co. of Indiana.

The Sun Shipbuilding Co. is also building two oil tankers of 7,600 tons each for the Standard Oil Co. of N. J.; three Diesel tankers of 8,480 tons each for the Texas Co.; two oil tankers of 7,600 tons each for the Standard Oil Co. of California; one Diesel tanker of 11,400 for the Sun Oil Co.; one tanker of 7,600 tons for Bermuth, Lembeke Co.; and two tankers of 7,600 tons each for the Tidewater Oil Co.

The summary of the Bureau's report for August 1 includes: A.B.S. class, 101 vessels of 322,635 gross tonnage; 50 steel vessels building, of 27,075 gross tonnage; and four wooden vessels building, of 1,110 gross tonnage. The total therefore shows 155 vessels, amounting to a tonnage of 350,620.

Silk Statistics

American mills took in a total of only 31,399 bales of all sorts of raw silk during the month of July. The total for June was 35,783 bales, and for July a year ago, 36,658 bales.

Imports for July totaled 27,337 bales, as against 40,037 bales in June and 31,388 bales in July, 1936. Mill takings for the month thus exceeded imports by more than 4,000 bales, and stocks at the end of the month in New York were down to 41,494 bales, as against 45,556 bales at the end of June. At the end of July a year ago, stocks were only 31,388 bales.

Raw silk in transit at the end of July amounted to 29,800 bales. This is 6,100 bales more than a month ago, but 5,300 bales less than a year ago.

Education

(Continued from page 14)

upon how you carry on your campaign. You must be self-effacing and yet persistent; tactful and insistent at the same time. And above all, you must create and maintain a reputation for delivering facts rather than excuses and of doing what at times may seem to be the impossible.

This is education from a new angle. It requires constant education for ourselves, constant application of all of the principles to which we subscribe. Even though the "understanding" we are seeking may be long in coming, we will have become better purchasing agents in the interim, and will have had the satisfaction of knowing that we have not been caught out on the end of the limb too often.

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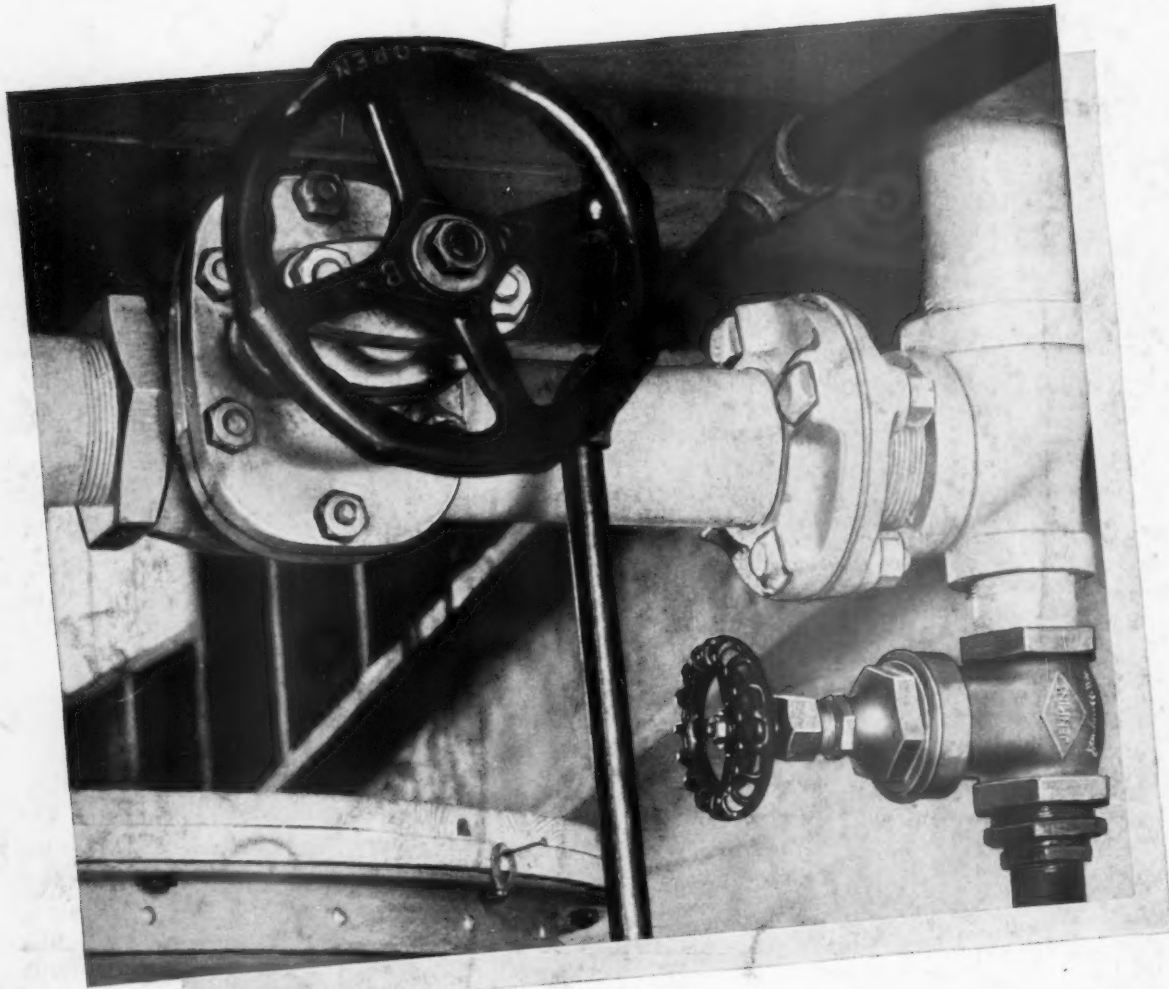
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